



Pay for Success

A how-to guide for local government focused on lead- safe homes

Released April 2017

National Center for Environmental Health
Division of Emergency and Environmental Health Services



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Acknowledgments

This Pay for Success guide was commissioned by the Centers for Disease Control and Prevention (CDC) and produced by Deloitte Consulting. Dr. Mary Jean Brown, Program Chief, Healthy Homes/Lead Poisoning Prevention Program, provided direction and full support for this effort, and the Deloitte team consisted of Jitinder Kohli, John Cassidy, Audrey Vaughn, Winny Chen, Jeff Merrell, and Brittany Marriott.

Our guide builds on the excellent work of the Social Impact Bond Technical Assistance Lab at Harvard University's Kennedy School, the Center for American Progress, Nonprofit Finance Fund, Social Finance (UK, US), and Third Sector Capital Partners. Their work and thought leadership has provided the firm foundation upon which this guide stands. We would also like to acknowledge the important work of the Green & Healthy Homes Initiative and its use of Pay for Success to support housing-related efforts.

We are grateful to the Pay for Success and lead poisoning experts around the country whose insights informed our thinking and whose comments, expertise, and reviews elevated the quality of this guide. In particular, we would like to thank the following individuals:

- Jackson Anderson, Healthy Housing Solutions, Inc.
- Tracy Barba, Social Finance
- Lori Bays, Salt Lake County
- Luke Bo'sher, New York University
- David Butler, MDRC
- Karen Crompton, Salt Lake County
- Annie Dear, Social Finance
- Megan Golden, Institute for Child Success
- Gloria Gong, Harvard SIB Lab
- David Jacobs, National Center for Healthy Housing
- Carolyn Kawecki, Healthy Housing Solutions, Inc.
- Jeremy Keele, Sorenson Policy Initiative
- Kristin Misner, New York City
- Michelle Moran, Social Finance
- Fraser Nelson, Salt Lake County
- Ruth Ann Norton, Green & Healthy Homes Initiative
- Tracy Palandjian, Social Finance
- Andrea Phillips, Goldman Sachs
- Jeff Shumway, Social Finance
- Anne White, Harvard SIB Lab

We would also like to express gratitude to our partners in Cuyahoga County, the City of Cleveland, and the Cleveland Foundation's Greater University Circle Initiative; they provided us with data, invaluable insights, and support in these efforts. Many of them are on the front lines of the battle against childhood lead poisoning and generously contributed time and energy to our work. Special thanks go to the following individuals:

- Chris Alexander, Ohio Department of Health
- Terry Allan, Cuyahoga County Board of Health
- Debbie Aloschen, Cleveland Metropolitan School District
- Neil Ammons, Cuyahoga County Department of Development
- Roberta Anderson, MetroHealth System
- John Belt, Ohio Department of Health
- Pamela Blais, Ohio Department of Health
- Pastor Shawn Braxton, New Life Cathedral
- Dorr Dearborn, Case Western University
- Robert Fischer, Case Western University
- Kim Foreman, Environmental Health Watch
- Heidi Gartland, University Hospitals Health System
- Stuart Greenberg, Environmental Health Watch
- Brian Kimball, Cleveland Department of Public Health
- Chris Kippes, Cuyahoga County Board of Health
- Lillian Kuri, Cleveland Foundation
- David Merriman, Cuyahoga County Health and Human Services
- Dania Nixon, Ohio Department of Health
- Antoinette Parrilla, Cleveland Department of Public Health
- Francisca Richter, Case Western University
- Kathy Schoch, Cuyahoga County Board of Health
- Tyler Serafini, Ohio Department of Health
- Angela Shuckahosee, Cleveland Tenants Organization
- John Sobolewski, Cuyahoga County Board of Health
- Kurt Stange, Case Western University
- Lisa Thomas, Cleveland State University
- Lou Tisler, Neighborhood Housing Services of Greater Cleveland
- Marianne Wolf, Cleveland Metropolitan School District

Preface

Pay for Success offers an innovative tool that brings new capital to proven solutions for social problems. It helps to funnel dollars to programs and social services that have real, measurable impact and enables public leaders to deliver services in effective and innovative ways.

This guide was created to inform readers who are interested in bringing PFS mechanisms to solving critical issues facing society today. While this guide's primary audience consists of city and state leaders who are responsible for the design and administration of social services, anyone committed to finding new ways to deliver social services and promote societal well-being may find the guide useful. The step-by-step guidance outlined herein will help you to do the following:

- Become familiar with PFS
- Learn about PFS projects that have taken place in the United States
- Determine if PFS is right for you, your political environment, and your chosen social issue
- Understand how PFS relates to lead poisoning prevention
- Walk through the phases and steps associated with developing a PFS arrangement

To help bring each portion of the guide to life, you'll see throughout the guide a case study that focuses on how PFS could be used in Cleveland, Ohio, to support lead poisoning prevention and home-remediation efforts.

This report was supported through contract #14FED1405220 with the Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. The findings and conclusions in these reports are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention or the U.S. Department of Health and Human Services.



What is Pay for Success and how does it work?

Pay for Success (PFS), also known as Social Impact Bonds, is an innovative arrangement that helps government deliver preventive social services to the people who need them most. PFS projects emphasize improved outcomes and results, enabling government to funnel scarce resources to programs that work.

Since the launch of the first-ever PFS project in 2010, state and local governments across the United States have planned and/or implemented dozens of PFS projects on an array of difficult social issues, including homelessness, early childhood education, workforce development, maternal health, and recidivism in prisons.

In PFS, a payor (traditionally a government entity) identifies a social outcome it wishes to see achieved and determines how much that outcome is worth. The payor then contracts with an external, non-governmental organization to produce that outcome. If that organization succeeds, the payor pays an agreed-upon amount of money based on the payor's assessment of how much the outcome is worth.

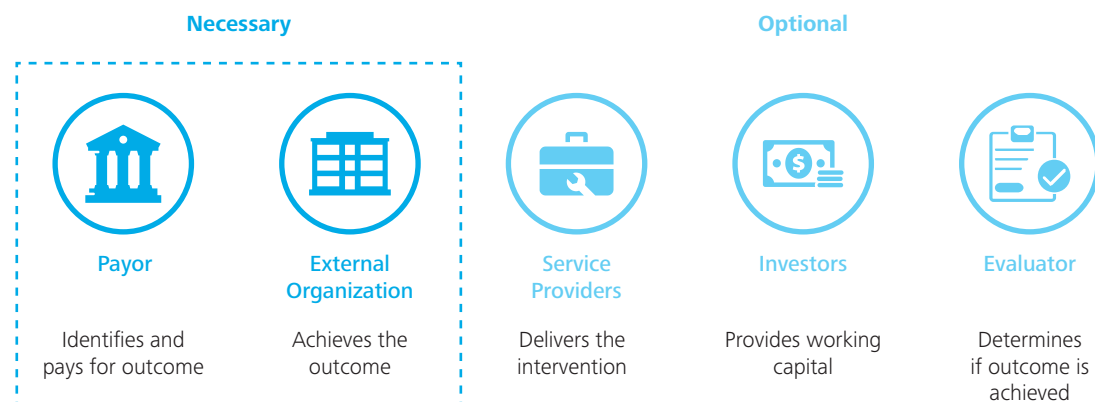
Pay for Success structures can vary by project

Given the relative infancy of PFS as a contracting model, there is no standard structure that has emerged as a best practice. The key to a PFS arrangement is the relationship between the **payor** and an **external organization**. The payor identifies an outcome it wishes to see achieved and names a price for that outcome, based on a combination

of cashable savings, well-being benefits, and social priority. The payor then promises to pay if the outcome is achieved, and the external organization does all that it can to achieve that outcome. In practice, however, the model can become more complex. Existing PFS models have included a host of different parties, including a payor, external organization, service providers, investors, and an evaluator—each with different roles and responsibilities.

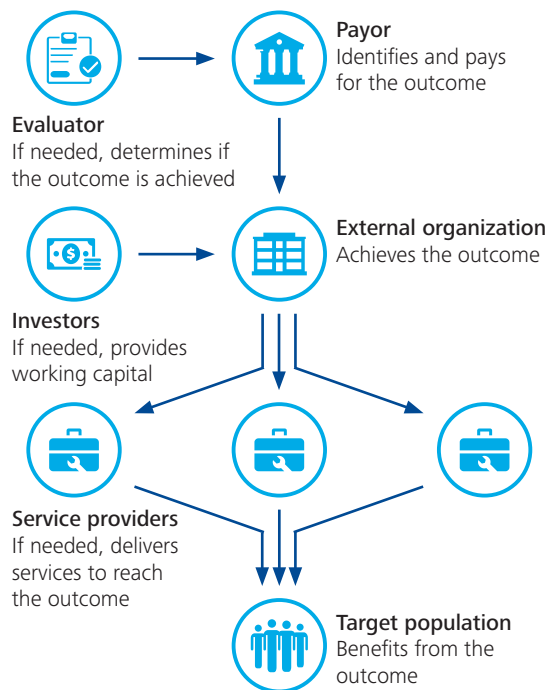
In most PFS projects in the United States, external organizations have not been in the business of delivering the specific services to the target population, and have hired **service providers** to deliver interventions. In this case, the external organization's role is to oversee the PFS project and serve as an intermediary between the payor and other parties to the contract.

Oftentimes, external organizations need to raise working capital from **investors** to start the project and deliver services. To date, investors in PFS projects have been a combination of foundations and private investors. It is the investors' responsibility to provide the upfront capital needed by the external organization to deliver services. In return, investors receive repayments on their loans from the external organization, sometimes with an accompanying marginal return on investment, if and when the external organization achieves the agreed-upon outcome and triggers payment by the payor.



Another component is the **evaluator**. If parties to the PFS contract wish to have an independent third party assess the outcomes and payments, they may hire an evaluator to assess outcomes and facilitate the payment process.

In the first-ever PFS project, which took place in Peterborough in the United Kingdom, the model included all of these components: payor, external organization, service providers, investors, and an evaluator.¹ The external organization raised capital from investors and delivered services through other organizations. This model is often described as an “intermediary” model because the external organization serves as an intermediary between all of the different parties. And while administrative data quality was high, there was still an evaluator to help establish whether the outcome was achieved. Since Peterborough, many PFS projects have featured “intermediary” organizations.



When is Pay for Success useful?

PFS initiatives have the potential to help solve difficult social problems and deliver an array of benefits to participants. However, PFS programs are not appropriate in all situations, given the risks and transaction costs entailed in creating PFS contracts. PFS projects are suitable in areas where:

- Outcomes are clear, observable, and measurable within the foreseeable future
- The policy area has effective and economical solutions that can be scaled
- The policy area matters to the public and has engaged supporters and champions

Outcomes are clear, observable, and measurable within the foreseeable future

PFS is best for projects where the outcomes are observable and objectively measurable within a few years of initiating a PFS contract so that government agencies can make payments, and investors can avoid tying up their capital for too long. For certain policy areas, such as recidivism, the outcome is easily defined, observable, and measurable—either the prisoner reoffends and returns to prison, or s/ he does not. For other areas, such as education, the outcome can be more challenging and requires, for example, a standard means to measure progress (e.g., standardized tests, graduation rates, longitudinal performance).

PFS programs also require rigorous data analysis to measure results, which suggests that policy areas where there is ample administrative data available are most suitable for PFS projects. Such data would ideally have clear links to costs or value to taxpayers. Measuring outcomes using data sources that already exist or are inexpensive to generate may help save on transaction costs. If the project cannot generate accurate, comprehensive, and preferably quantitative data to measure change over time, it may be challenging to determine

Early Childhood Education in Chicago

After pioneering the successful development and implementation of a PFS project focused on early childhood education in Salt Lake County, the two primary investors from that project, Goldman Sachs and J.B. Pritzker Foundation, took their expertise, experience, and familiarity with pre-K interventions to Chicago as part of a similar PFS project. There, these investors partnered with the city of Chicago and Chicago Public Schools to improve kindergarten readiness among Chicago youth.

¹ Some U.S. PFS projects, such as Massachusetts’ Recidivism Reduction and Employment project and Utah’s High Quality Pre-School Initiative, have included a validator or an auditor to validate the evaluator’s methods and results.

whether success has been achieved. In the best scenarios, PFS projects would have a control or comparison group, against which the PFS project can be measured. Having a similar group that controls for external variables, such as different social or economic factors, allows for participants to better understand the impact of a particular PFS intervention.

The policy area has effective and economical solutions that can be scaled

Practically, investors will be more likely to risk their capital if the PFS project includes evidence-based and cost-effective interventions that have a high likelihood of delivering the outcome. The larger the evidence base to demonstrate the efficacy of these interventions, the better. PFS projects may be particularly useful when proven interventions exist but they have yet to be scaled effectively.

It is important that interventions for PFS projects are replicable and scalable to meet the needs of a potentially larger target population. There are multiple factors to consider when evaluating if an intervention can be replicated and scaled, but one overarching factor is determining if delivering the intervention requires a specialized skill, and if there are enough personnel who have those credentials to meet the needs of the larger population.

The policy area matters to the government and has engaged supporters

The experiences of state, county, and city leaders designing and implementing PFS initiatives have shown that having governmental support of the social issue is important to the success of a PFS project.

Existing and emerging policy areas for Pay for Success

Several governments around the world have begun to explore PFS projects in the following policy areas: prison recidivism, early childhood education, homelessness, juvenile justice, health (asthma prevention), and workforce development. The table on the next page reflects some recent PFS contracts in the United States.

States and cities have tended to focus on policy areas in which PFS contracts have already been implemented. However, programs could be effective in a variety of social contexts. Other social areas for consideration for a PFS program include workforce

development, veterans' services, energy efficiency, and public health.

Advantages of Pay for Success

Public officials have a responsibility to use scarce resources to deliver the greatest impact. In budget-constrained times, directing limited government funds toward initiatives that deliver tangible results becomes all the more imperative. PFS projects can help to do just that.

- PFS projects enable governments to focus resources on outcomes and to pay only for programs that produce the desired results.² If the external organization achieves the outcome, the government benefits in cost savings and societal gains. It will also have proof that a certain intervention works and can scale it to other localities. If the external organization does not achieve the outcome, the government pays nothing and can redirect its resources to other programs elsewhere.
- PFS can be more flexible than traditional methods of funding social services. A PFS arrangement allows and even encourages multiple payors to pool their resources for a common purpose and share benefits of the outcome (e.g., education and employment agencies jointly contributing to youth unemployment programs). This is especially advantageous for programs or interventions that have high upfront costs and cannot be supported under existing single-issue funding structures. They also leverage management expertise from various sectors to achieve an outcome in one specific project or area.
- PFS projects may be good for traditionally difficult programs. A PFS arrangement provides sufficient freedom for an external organization to use whatever means it sees fit (within ethical and legal bounds). If an intervention or method does not deliver results, no government resources will go toward funding those activities.

Challenges of Pay for Success

While PFS can offer a range of benefits and advantages, it can also present significant challenges. Among them is the fact that PFS models are new and complicated ventures. Identifying the right participants, aligning incentives, and negotiating a multi-year, data-intensive, complex legal contract with multiple stakeholders requires

2 The focus on achieving outcomes is what sets Pay for Success programs apart from performance-based contracting, also known as "Pay for Performance," which compensates on the basis of performance and process measures, not outcomes. PFS arrangements also bring the added benefit of providing upfront, multi-year working capital to service providers, which performance-based contracting does not typically provide.

Pay for Success projects in the United States

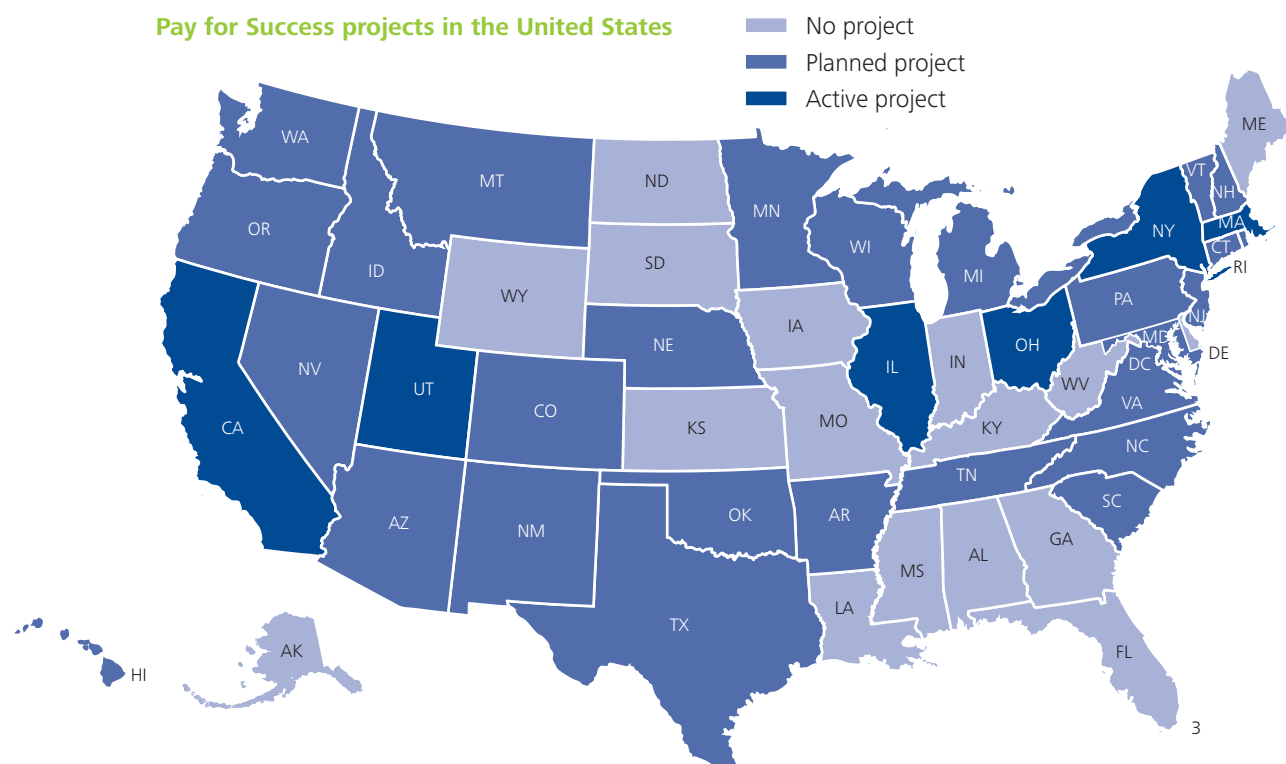


Table 1

PFS Program	Size of Investment	Total Payments Possible	Term/Timeframe
Chicago Child-Parent Center Initiative (IL)	\$16.9 million	\$34 million	17 years
Massachusetts Recidivism Reduction and Employment (MA)	\$21.7 million	\$27 million (includes costs of intermediary and evaluation)	7 years
NYC Rikers Island Recidivism Reduction Initiative (NY) ⁴	\$9.6 million (\$2.4 million per year)	\$11.7 million	4 years
New York State Recidivism Reduction and Employment Initiative (NY)	\$13.5 million	\$23.5 million (includes cost of intermediary and evaluation)	5.5 years
Utah High Quality Pre-School Initiative (UT)	\$7 million	Not given	8-9 years for each cohort; 12 years for all 4 cohorts
Cuyahoga Partnering for Family Success Program (OH)	\$4 million	\$5 million	5 years

³ This map is constantly changing as states design and implement their own PFS projects, but the image included in this guide illustrates those projects in development or implementation at the time of publication (source: PayforSuccess.org, accessed July 2015)

⁴ The initial phase of this PFS project did not show sufficiently positive results, causing the project to terminate in August 2015



a substantial amount of time, resources, and commitment. The transaction costs of developing a PFS arrangement may prove prohibitive in some cases, particularly for smaller and nonprofit organizations that may not have the resources needed to participate. Moreover, when simpler funding mechanisms already exist, the justification for a payor to undertake a PFS project may need to be extraordinary.

Another concern that critics have raised is around administrative or legislative turnover. PFS project participants, particularly investors, want assurances that they will be paid once the outcome is achieved, regardless of who holds office. Participants' concern is that a new administration may not support or wish to continue or pay for programs established under the previous government. One way that local and state governments can offer assurances to the PFS project participants is through legislation that establishes mechanisms for repayment, such as a trust fund, and has enforcement mechanisms or penalties for not fulfilling those repayment obligations. Other concerns can be addressed by building clauses into the contract that would allow either the government or the external organization

to terminate the agreement under very strictly defined circumstances.⁵

Other challenges include measurement and scaling. Stakeholders must come to agreement on definitions, outcomes, costs, benefits, indicators, and how to evaluate and pay for all of these metrics objectively. Defining objective measures of success in social programs is difficult, and ascertaining how benefits accrue to an array of organizations further complicates the process. A rigorous, systematic, and non-biased evaluation process that satisfies all parties must be developed. Additionally, programs have been inconsistent in successfully replicating and scaling to larger programs while maintaining the level of efficacy demonstrated in smaller or model programs.

⁵ Costa, Kristina, Sonal Shah, Sam Ungar, and the Social Impact Bonds Working Group. "Frequently Asked Questions: Social Impact Bonds." Center for American Progress, 5 Dec. 2012.

How Pay for Success can support lead poisoning prevention

Lead poisoning remains a serious problem in the United States

Millions of children in the United States today are at risk of being poisoned from lead in their own homes. Studies by the Centers for Disease Control and Prevention suggest that there are at least 3.8 million old and deteriorating houses with lead-based paint hazards that have children in them.⁶ The adverse health effects of lead poisoning are irreversible and can be extremely serious. Lead poisoning can impair a child's brain development and result in lower intelligence quotient (IQ) and increased behavioral problems, such as shortened attention span and antisocial behavior, and poorer educational attainment.⁷ These health issues affect children's lives beyond just health: statistically, a lead poisoned child is seven times more likely to drop out of school and six times more likely to be involved in the juvenile justice system.⁸ Studies have also shown that elevated blood lead levels among a population affect rates of crime, including simple assaults and petty thefts and, in the most severe cases of lead exposure, murder.⁹

Although incredible progress has been made since the federal government began taking steps in the 1970s to limit the public's exposure to lead, lead poisoning is still a widespread and urgent danger around the country; it disproportionately affects young children from low-income areas, particularly non-Hispanic Black communities.¹⁰ Low-income families are more likely to live in old, deteriorating houses that have chipping lead paint and low property values.¹¹ Education is often thought of as the way out of poverty, but if a child in poverty experiences lead poisoning, the resulting significant brain and developmental damage can adversely

impact the education of the child and consequently perpetuate the cycle of poverty.

Compounding the tragedy is the fact that lead poisoning is an entirely preventable disease. Banning lead in gasoline and paint has already significantly reduced the number of lead poisoning cases,¹² saving generations of children from the scourge of the disease. However, funding streams for lead poisoning prevention programs have declined over the last few years. Pay for Success may provide an alternative to traditional funding streams focusing on eradicating lead poisoning

Primary prevention vs. secondary prevention

When it comes to lead poisoning prevention, there are two different types of prevention to consider: primary prevention and secondary prevention. Primary prevention focuses on taking action before a child falls victim to lead poisoning, whereas secondary prevention focuses on responding to instances where a child has already been poisoned (as demonstrated by an elevated blood lead level).¹³ An example of primary prevention is the identification and remediation of houses in order to eliminate all potential lead hazards for children, thus reducing risk for children who reside in the dwelling now and in the future. An example of secondary prevention is the management of the health implications of a poisoning and addressing the hazards that caused the poisoning.

Primary prevention may be the better choice on which to focus efforts and resources, as it eliminates hazards before a child is poisoned. If all primary prevention efforts were successful, there would be no need for secondary prevention efforts. Moreover, responding once a child has a high blood lead level does not reverse damage already incurred.

6 Jacobs, D. E. et. al. "The Prevalence of Lead-Based Paint Hazards in U.S. Housing." *Environmental Health Perspectives* 110: A599-A606. 13 Sept 2002.)

7 "Lead Poisoning and Health." World Health Organization. 1 October 2014. Web. 17 June 2015.

8 Needleman, Herbert L. et al. "The Long-Term Effects of Exposure Low Doses of Lead in Childhood." *The New England Journal of Medicine* 322.2 (1990): 83-88. Web. 14 July 2015.

9 Nevin, Rick. "Understanding International Crime Trends: The Legacy of Preschool Lead Exposure." *Environmental Research* 104 (2007): 315-36. Science Direct. Web. July 2015.

10 Childhood Lead Poisoning." Centers for Disease Control and Prevention. Web. 17 June 2015.

11 Castele, Nick, Kay Colby, and Dorr Dearborn. "Sound of Ideas." *The Lead Crisis Abandoned*. The Ohio Channel. 28 May 2015. Web. 17 June 2015.

12 "About Lead-Based Paint." U.S. Department of Housing and Urban Development. Web. 17 June 2015.

13 "Preventing Lead Exposure in Young Children: A Housing-Based Approach to Primary Prevention of Lead Poisoning." Center for Disease Control and Prevention. Web. 18 June 2015.

Using Pay for Success to support lead poisoning prevention efforts

Most of the government's dollars for lead poisoning prevention are currently allocated to secondary prevention. This leaves limited funding for primary prevention efforts.

PFS projects are commonly used for prevention-oriented programming in areas where existing government funding may not be available. Therefore, PFS projects provide an alternative funding mechanism that allows primary prevention to be the focus of lead poisoning prevention.

Pay for Success guide

Overview of what is ahead

Now that you have a basic understanding of PFS and how it works, it is time to explore the next steps for developing a PFS project.

The remainder of this guide will be broken up into four sequential phases, which are designed to help you take the necessary steps to develop a PFS project. Phase 1 focuses on determining if PFS is right for you. Phase 2 outlines a few initial steps to get a feel for how PFS might work given your particular context and issue area. Phase 3 walks you

through the detailed, in-depth analysis to build an actual PFS project, and Phase 4 is all about building the right team, contract, and PFS implementation and evaluation.

As we walk through each phase, you'll see that we've included an example to help bring the step-by-step instructions to life. For the purposes of this guide, the case study focuses on Cleveland and what could be done to develop a PFS arrangement on lead poisoning prevention in the city.



How to use this guide



The left side of the guide walks through the process of developing and implementing a Pay for Success project in a step-by-step manner

The right side of the guide provides an illustration of how the steps on the left side can be applied to Pay for Success efforts in the Greater Cleveland area

The sections with a green line give examples of how a particular step might apply to lead poisoning prevention generally

It is also important to think through whether the outcome can be controlled for other factors. One way to get at this is to select a sample size that is sufficiently large enough to reduce the chances of attributing results to coincidence or chance. You can also design the intervention to have control and comparison groups or counter-factual groups, so that it is easier to measure the impact from the specific intervention.

A typical PFS outcome focuses on some kind of social outcome; in the case of lead poisoning, it would be a reduction in the number of childhood lead poisoning cases. However, because there is a very strong evidence base that remediating homes causes or directly leads to a reduction in lead poisoning cases,¹⁹ one could instead use the number of remediated homes as the outcome for a PFS project. Moreover, a housing-based outcome is more easily observable and measurable.

When thinking through what the best outcome might be, consider how the outcome would be measured (in the case of homes, measurement would be relatively easy: count the number of homes that are remediated), as well as if there are any risks associated with achieving it (e.g., if remediation is not maintained, any lead-related problems may re-emerge and pose risks to the affected population).

Determine if there are interventions that can achieve the outcome

A core component to successful PFS is taking advantage of effective interventions. You may already know what works, or you may need to determine if those kinds of interventions are available in your issue area.

Key questions:

- What does it take to achieve the outcome you've selected?
- Who has achieved that outcome before and how did they do it?
- Which interventions have proven to be effective on this social issue?
- Which interventions have proven to be effective with this target population?
- Are these interventions replicable in your locality?

As you do the initial work to answer these questions and identify the interventions that might work best, keep in mind that there are different ways that you can find "effective" interventions. For example, you may consult an evidence-based practices database in your field. Another option would be to find an organization that has a strong track record in working with the individuals and/or social groups that make up your target population. Another example might be seeking out organizations that have qualifications in tackling the same social issue elsewhere.

19 Kennedy, Chinaro, et al. "Primary Prevention of Lead Poisoning in Children: A Cross-sectional Study to Evaluate State Specific Lead-based Paint Risk Reduction Laws in Preventing Lead Poisoning in Children." *Environmental Health* 13.93 (2014): 1-10. Web. 14 July 2015.

Phase 2: Will a Pay For Success arrangement work for your issue area?

As Greater Cleveland leaders develop a housing-related outcome, they must also consider potential perverse incentives associated with that outcome (i.e., incentives that go against the target population's well-being). For example, an outcome of fewer houses with lead hazards may incentivize an external organization to pursue wide-scale development and gentrification in the affected areas, which would displace low-income families in a city with limited affordable housing. It is important that leaders think about structuring the outcome with appropriate restrictions or specifications that eliminate the possibility of counterproductive or harmful behavior, such as requiring arrangements to keep housing in the community affordable and available to families who reside there.

Determine if there are interventions that can achieve the outcome

To achieve an outcome of more lead-safe houses, the intervention is relatively clear: conduct widespread and systematic home remediation in the communities most affected by lead-related issues. There are multiple forms of remediation, including demolition, complete paint removal, and making a housing unit lead-safe by focusing on windows and doors.

Below are two possible interventions for reaching that outcome. Both approaches allow for more than one external organization to participate and deliver services at any one time.

Approach 1:

- The payor conducts assessments of housing units in the Greater Cleveland area and identifies houses that would benefit from lead remediation; criteria could include year of construction, whether a child has been poisoned in the house before, and whether a child under the age of four lives in the house, among other considerations
- The payor classifies houses into bands based either on the risk of the house poisoning a child (e.g., whether a young child lives in the home or will likely live there in the future) or on the level of difficulty and cost of the work to remediate the house; if the former, the payor may work closely with public health officials and experts to determine how best to develop a classification system that clearly and accurately delineates the different levels of risk and urgency

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Phase 2

This tab will help you navigate the phases involved in developing a PFS arrangement

Phase 1: Is a Pay for Success arrangement right for you?

Pay for Success offers a way to ensure that government dollars are only spent if the project is successful, as measured by predetermined outcomes. PFS holds the promise to deliver both better outcomes and greater accountability over how taxpayer dollars are spent (or not spent), but PFS arrangements are also complicated and require extensive time and energy. So, is PFS right for you and the state or local government you represent?

Diagnostic tool

This diagnostic tool is designed to give you an idea as to whether PFS is right for you, your organization, and your issue area. Although we suggest that you read this guide in its entirety to understand what putting together a PFS arrangement entails, the following questions will help you decide whether or not to move forward with the more detailed, in-depth analysis associated with creating PFS arrangements.

The questions below are divided into two sets of considerations: practical considerations (i.e., analyzing your particular environment), and issue considerations (i.e., evaluating the policy or issue area on which you're interested in focusing). Each question has multiple answers to choose from, with a point value assigned to each answer. Once you've answered all of the questions, you can use the box immediately following the questions to total up your score and see what that score means.

Part I: Practical Considerations

1. *Are you (and/or your organization) willing to commit several months to developing a PFS arrangement?*

- A. Yes, we have the time and resources needed to develop a PFS arrangement
- B. We are not sure if we'd be able to dedicate several months to this effort
- C. No, we cannot commit several months to developing a PFS arrangement

2. *Is the environment one that is open to innovation and exploring new ideas?*

- A. Yes, the leadership around me is open to trying new things and has dedicated resources (i.e., time, energy, money) to new ideas previously
- B. I believe that leadership is open to innovation, but it is difficult to gauge how open leaders might be to actually dedicating resources to innovative ideas
- C. In some ways yes, and in some ways no; I believe that certain leaders are very open to innovation, but others are not

- D. Based on my experience working here, it is unlikely that leadership would be open to new ideas
- E. No, recent experiences have made it clear that leadership is not willing to try something new and innovative

3. *Are there leaders who will support you and champion your PFS effort?*

- A. Yes, I can think of multiple leaders who would be interested in proactively exploring Pay for Success and dedicating the time and energy needed to champion that process
- B. I think that there is at least one leader who would be interested in exploring and leading the charge on something like this, but I'm not sure who that might be
- C. No, I highly doubt that any would be willing to dedicate the time and energy needed to support and champion something like this

4. *Is government willing to re-think traditional contracting to allow more flexibility for an outside organization to focus on outcomes?*

- A. Yes, I believe that the government would be willing to allow more flexibility to an outside organization if that would increase the likelihood of achieving a positive outcome
- B. I'm not sure if the government would be willing to allow an outside organization to do something like this; it will depend on the specific government leader and outside organization
- C. No, the government cannot or does not seem willing to provide an outside organization flexibility to provide services to the public that normally come from government

5. *When partnering with an outside organization, is the government willing to provide significant autonomy and leeway on how an outside organization achieves the outcome?*

- A. Yes, I believe that the government would be willing to provide an outside organization significant autonomy over how that outcome is achieved
- B. I think that the government would allow an outside organization to create its own approach but would most likely require the organization to receive government approval on the details before putting that plan into action and for any changes
- C. No, the government is risk averse and would want to

maintain control over a project and prescribe specific activities and outputs

6. Can you get access to budgetary, financial, and administrative data related to your issue area?

- A. Yes, it is possible to access ample data and doing so should not be too challenging
- B. It is possible to access data, but the process in obtaining that data will be extensive and involved or data will be sparse
- C. It is unlikely that anyone would be able to access the data needed to do a PFS project, especially in a timely manner
- D. No, it would be really difficult to access this data or the data does not exist

Part II: Issue Considerations

7. Do you have an important social issue that needs a solution and has not seen improvement despite previous government-led interventions?

- A. Yes, I can think of a specific social issue that is important to the government and where efforts to address the issue have not resulted in lasting improvement
- B. The social issue is important to the government, and while previous efforts to address the issue have led to some improvement, the issue remains
- C. No, the social issue is not a priority for the government and/or previous efforts have successfully and effectively addressed the issue

8. Can you think of a government agency or other organization related to this social issue that might be willing to employ an outcomes-based contract to help address the issue? (Outcomes-based contracts are contracts in which the payor pays a service provider for results rather than for activities.)

- A. Yes, I can think of a government agency or other organization that would be willing to administer an outcomes-based contract for this social issue
- B. I'm not sure if there is a government agency or other organization that would be willing to participate in something like an outcomes-based contract for this social issue
- C. No, I cannot think of a government agency or other organization that would be willing to administer an outcomes-based contract for this social issue

9. Is that social issue one that might be best addressed through using more or better preventive services or methodologies?

- A. Yes, I think that the social issue could greatly benefit from more preventive services
- B. I believe that the social issue I've chosen might need preventive measures, but I'm not sure
- C. No, I do not believe that the social issue I'm focused on is conducive to a preventive approach

10. Is there a clearly defined population that you would like to help by providing additional and/or better services?

- A. Yes, I know exactly which population(s) are most likely to be affected by this social issue and I'm confident that their needs would be met through additional or better services
- B. I have an idea as to which population(s) are most likely to deal with this social issue
- C. No, I do not know which population(s) are most likely to deal with this social issue, and I'm unsure how to figure that out

11. Is there a clear, measurable outcome related to the social issue that, if achieved, is likely to have lasting, positive impact on that issue?

- A. Yes, there is a clear outcome that I think can be achieved, and achieving that outcome would go a long way in addressing the social issue
- B. Yes, there is a clear outcome that I'd like to see achieved, but for various reasons, the impact of achieving that outcome may not be very obvious or apparent
- C. I'm not sure what outcome needs to be achieved in this social issue—I just know that it is an issue that deserves additional attention

12. Would the impact of achieving the outcome be visible in less than eight years?

- A. Yes, I believe that the impact of achieving the outcome would be visible in less than eight years
- B. The impact of will be visible, but it may take longer than eight years
- C. No, the impact of achieving the outcome will not be visible, regardless of time

13. Do effective interventions that can achieve the outcome exist?

- A. Yes, I am aware of at least one intervention around this social issue that works
- B. I'm not sure if interventions that are likely to achieve this outcome exist, but I believe it is possible that they do and have been used elsewhere
- C. No, I am not aware of any successful interventions relative to this social issue that have been proven to achieve this outcome in an effective manner

14. Do local organizations have the capacity needed to implement these interventions?

- A. Yes, I can think of at least one organization with the capacity to implement the interventions
- B. I'm not sure if any local organizations have the capacity to implement the interventions
- C. No, I do not believe that any local organizations have the capacity to implement the intervention

Diagnostic Scoring

Using the table below, total up your points and determine to what extent you are prepared to use Pay for Success.

		Point Values by Answer Option					Your Points
Question		A	B	C	D	E	
Practical Questions	Question 1	5	3	1	-	-	
	Question 2	5	4	3	2	1	
	Question 3	5	3	1	-	-	
	Question 4	5	3	1	-	-	
	Question 5	5	3	1	-	-	
	Question 6	5	4	2	1	-	
Issue Questions	Question 7	5	3	1	-	-	
	Question 8	5	3	1	-	-	
	Question 9	5	3	1	-	-	
	Question 10	4	3	2	-	-	
	Question 11	5	3	1	-	-	
	Question 12	5	3	1	-	-	
	Question 13	5	3	1	-	-	
	Question 14	5	3	1	-	-	

Practical Score (Questions 1–6 only)

Issue Score (Questions 7–14 only)

Total Score

If your **Practical Score** is...

- 21–30—Your score indicates that you are in a great situation where you have the willingness, support, and data needed to develop a PFS arrangement
- 11–20—Your score indicates that PFS might work in your situation, but additional work needs to be done to determine if PFS is a good fit for your particular situation
- 0–10—Your score indicates that PFS may not be the best fit for you and your particular situation

If your **Issue Score** is...

- 26–39—Your score indicates that you have chosen a social issue that is conducive to the development of a PFS arrangement
- 13–25—Your score indicates that PFS might work for your social issue, but additional analysis needs to be done to determine if PFS is the best fit for your social issue
- 0–12—Your score indicates that PFS may not be the best fit for your chosen social issue

If your **Total Score** is...

- 46–69—Your score indicates that you are in a great situation where you have the willingness, support, data, and social issue needed to develop a PFS arrangement
- 23–45—Your score indicates that PFS might work for you, your situation, and your chosen social issue, but additional work and analysis needs to be done to determine if PFS is the best fit for you, your situation, and your social issue
- 0–22—Your score indicates that PFS may not be the best fit for you, your situation, or your chosen social issue

Select a social issue or issue area

In some cases, government leaders will already have specific issue areas in mind for a PFS project. In Salt Lake County and Massachusetts, for example, leaders already identified early childhood education and homelessness as their issues, respectively.

In other places, there may be interest in pursuing a PFS project but no specific issue areas have emerged, and government is looking to establish which areas are worth exploring. If you are looking to narrow in on a promising issue area for a PFS program, you can develop a short list of PFS candidates based on the factors discussed previously: public support for the issue, underinvestment in preventive measures, the potential for measurable and observable outcomes, availability of effective interventions, and availability of service providers of interventions. Alternatively, you can solicit ideas from potential service providers. Many states, including New York, Illinois, Michigan, Colorado, and Pennsylvania, have issued Requests for Information to solicit ideas for social issues on which they could focus a PFS project.

Select a social issue or issue area

Lead poisoning remains a serious and widespread problem in Greater Cleveland,¹³ particularly in the low-income urban areas, where poorer families live in old, deteriorating housing units¹⁴ that have low property values. Meanwhile, funding for home remediation programs in Cleveland and Cuyahoga County has shrunk dramatically.

Greater Cleveland is a hotspot for child lead poisoning, with about 15 percent of children age six and younger testing positive for elevated blood lead levels. In some neighborhoods, more than one in four children tested have lead poisoning.¹⁵ The most common cause of poisoning in children is lead paint in houses built before 1978, the year that the federal government banned the use of lead in paint. At least 500,000 housing units in Cuyahoga County have been identified as at-risk of potentially poisoning a child, and so far, only 5,000 houses have been remediated using federal grant money.¹⁶

Lead poisoned children have poorer health, educational, and social outcomes in life. Lead poisoning can affect children's brain development, dropping their intelligence quotient and rendering adverse effects on behavior, such as shortened attention span, antisocial behavior, and reduced educational attainment.¹⁷ These effects are irreversible and can last an entire lifetime. For Greater Cleveland, lead poisoning incurs costs in the forms of healthcare, special education, juvenile justice, and loss in lifetime earnings.

A PFS program has the potential to dramatically improve lead-related outcomes in Greater Cleveland. By funding preventive measures, a PFS project could lead to a significant reduction in lead poisoning cases among children in three to eight years.¹⁸ Different interventions can be used, including lead-hazard reduction (i.e., housing unit remediation), abatement, housing enforcement, and safety educational programs, among others. Moreover, government and civil society leaders in the area consider lead poisoning prevention a top priority and have expressed interest in using innovative approaches to resolving the issue.

13 For the purposes of this guide, "Greater Cleveland" refers to the city of Cleveland and adjacent suburbs; most of the county-level quantitative data included in the guide encompasses the entirety of Cuyahoga County.

14 For the purposes of this guide, the following terms are used synonymously and interchangeably: housing unit, house, home, unit.

15 Experts estimate that these figures may be incomplete, as not all children are tested for lead; experts estimate only about 60–70 percent of children on Medicaid in the area are tested.

16 Castele, Nick, Kay Colby and Dorr Dearborn. "Sound of Ideas: The Lead Crisis Abandoned." The Ohio Channel. 28 May 2015. Web. 17 June 2015..

17 Needleman, Herbert L. et al. "The Long-Term Effects of Exposure Low Doses of Lead in Childhood." The New England Journal of Medicine 322.2 (1990): 83-88. Web. 14 July 2015.

18 Preventing Lead Exposure in Young Children: A Housing-Based Approach to Primary Prevention of Lead Poisoning." Centers for Disease Control and Prevention. Web. 18 June 2015.





Phase 2: Will a Pay for Success arrangement work for your issue area?

Once you have determined if a PFS project could work for your city or state and identified the social issue that you'd like to address, you can focus on determining if a PFS project is conducive to the particular problem you have in mind. Not all social issues can be addressed effectively using PFS, but for those that can be, PFS holds a lot of potential to lead to real, substantive societal improvements.

The following series of initial scoping activities will help you to determine at a high level if PFS is appropriate for addressing your chosen issue area. You may undertake these steps sequentially or concurrently.

Identify the target population and the problem you wish to address

Since PFS projects focus on bringing effective social services and interventions to the people most affected by a problem, it is important to determine who those people in your city or state are.

Key questions:

- Which individuals or social groups are most heavily affected by the problem you are trying to solve and why?
- In what ways does the problem affect their lives?
- What is it about their environments or circumstances that lead them to need social services more than other groups?
- Essentially, who constitutes the target population that should receive the intervention?

One way to identify and begin understanding the target population is to analyze where government resources (i.e., time, money) are currently being spent. Who are the beneficiaries of spending on the issue? Which groups consume the most resources and why? It is common for PFS efforts to focus on better serving or caring for individuals or social groups that consume a disproportionate amount of government resources through implementing effective preventive interventions.

Early Childhood Education in Salt Lake County

The mayor's office in Salt Lake County, Utah identified education as an area of focus because the County was spending \$2,600 per student annually for remedial/special education services and because too many children were not ready for kindergarten. After analyzing related data available at the county and school-district levels, the mayor's office realized that there was a group of "at-risk" children who effectively required remedial education services upon beginning kindergarten due to the fact that their vocabularies were significantly smaller than those of their peers. As a result of this discovery, Salt Lake County focused its first PFS project on providing early childhood education services to these "at-risk" children.

Identify the target population and the problem you wish to address

Cleveland is one of many U.S. cities that grapple with the issue of lead poisoning. While significant improvement has been made from a decade-long, community-wide effort to educate families and remediate lead-hazard housing units, thousands of additional houses still contain lead hazards, and individuals and families in the Greater Cleveland area are still at risk of suffering the consequences of childhood lead poisoning.¹⁹ Ultimately, it is these individuals and families that the PFS project should positively impact.

However, a PFS project on lead poisoning is unusual in that the target "population" is houses, not children. This is because those who suffer from lead poisoning often live in unsafe housing situations in old and impoverished communities and can be highly transient, with some families moving as often as multiple times in one year. The transient nature of this group makes it challenging to identify and track those who are at risk. It is easier, more practical, and more effective to identify and address the source of the lead poisoning—hazardous housing units.

Moreover, focusing on "upstream" interventions in the housing for at-risk children (primary prevention) holds the potential to help children before they are poisoned. Focusing on the "downstream" effects of lead poisoning (secondary prevention), by taking actions after a child has been exposed to mitigate the impacts of lead

¹⁹ Castele, Nick, Kay Colby, and Dorr Dearborn. "Sound of Ideas." The Lead Crisis Abandoned. The Ohio Channel. 28 May 2015. Web. 17 June 2015.

²⁰ Preventing Lead Exposure in Young Children: A Housing-Based Approach to Primary Prevention of Lead Poisoning." Center for Disease Control and Prevention. Web. 18 June 2015.

Another potential strategy to consider is to use geographic information system (GIS) mapping to identify demographic patterns (e.g., census data on educational achievement, housing conditions, vacancy rates, hospital admissions for lead poisoning) and focus in on specific regions that are in the most need.

Children affected by lead poisoning have been shown to have poorer health, educational, and social outcomes than the general population. They are more likely to require ongoing healthcare and special education services, and they are more likely to end up in the juvenile justice system, which puts a substantial burden on government resources over time.¹⁸

Currently, the government expends funds to identify children with elevated blood lead levels; investigate the properties at which they live for environmental hazards; and provide to them needed medical care, case-management services, and/or development-related counseling services. However, many of these services are reactive and come too late to stop this group from needing additional services later in their lives, which suggests that they may benefit from earlier preventive interventions. Since a primary source of lead poisoning is older, unsafe housing, an area to focus on may be the housing stock. In this circumstance, the PFS target population becomes the housing units in which vulnerable individuals and families reside.

Identify an outcome

After you have chosen a specific social issue or issue area and have a good idea of which individuals or groups are most affected by that issue, it is time to figure out what you'd like to achieve through a PFS project.

Key questions

- What do you want to change for the target population as a result of the PFS project?
- What is the desired outcome?
- How will the outcome affect the target population?
- Are there perverse incentives to this outcome?

The outcome you want to achieve should have a measurable, positive impact on the target population; conversely, it is important to think through any potential perverse incentives that might appear in the pursuit of achieving that outcome (i.e., any behavior that harms or goes against the target population's well-being). For example, a PFS project on reducing the rate of homelessness within a city's limits may introduce a perverse incentive to push the homeless population out of the city without any improvement to their circumstances or well-being. In such a case, the outcome should be modified to reduce homelessness for those who are currently homeless.

poisoning on the child, is much less effective.²⁰ Thus, an intervention focused on a target population of housing units is more practical and effective for a PFS project than one focused on children.

A portion of local government resources are currently dedicated to primary prevention, but the majority of government resources are consumed by carrying out secondary prevention efforts where a child has already demonstrated an elevated blood lead level. This means there is room for more and better primary prevention efforts and services.

Identify an outcome

Cleveland and Cuyahoga County have a few different options to take to eradicate lead poisoning, but almost everyone agrees that the risk for lead poisoning a child begins with unsafe housing. If you remediate the housing stock, you attack lead poisoning at its roots. A potential outcome for the PFS project then would be a significant reduction in the number of houses that can poison children (i.e., more remediated housing units).

Other reasons for Greater Cleveland to focus on a primary prevention-based outcome include:

- Primary prevention can deliver greater levels of impact in the timeframe of a typical PFS project
- Secondary prevention is reactive, taking place only after a child is poisoned, and does not directly tackle the source of the lead poisoning problem; this leaves the potential for other children to be exposed to lead hazards in the housing unit
- By having a greater impact on the scale of the lead poisoning problem sooner, primary prevention holds potential to produce higher levels of savings and public health, which provides greater incentives for participants in a PFS project
- Repairs to housing units may help to stabilize the units' conditions, which may lead to less unit abandonment and increased neighborhood stability

¹⁸ "Lead Poisoning and Health." World Health Organization. 1 October 2014. Web. 17 June 2015.

It is also important to think through whether the outcome can be controlled for other factors. One way to get at this is to select a sample size that is sufficiently large enough to reduce the chances of attributing results to coincidence or chance. You can also design the intervention to have control and comparison groups or counter-factual groups, so that it is easier to measure the impact from the specific intervention.

A typical PFS outcome focuses on some kind of social outcome; in the case of lead poisoning, it would be a reduction in the number of childhood lead poisoning cases. However, because there is a very strong evidence base that remediating homes causes or directly leads to a reduction in lead poisoning cases,¹⁹ one could instead use the number of remediated homes as the outcome for a PFS project. Moreover, a housing-based outcome is more easily observable and measurable.

When thinking through what the best outcome might be, consider how the outcome would be measured (in the case of homes, measurement would be relatively easy: count the number of homes that are remediated), as well as if there are any risks associated with achieving it (e.g., if remediation is not maintained, any lead-related problems may re-emerge and pose risks to the affected population).

Determine if there are interventions that can achieve the outcome

A core component to successful PFS is taking advantage of effective interventions. You may already know what works, or you may need to determine if those kinds of interventions are available in your issue area.

Key questions:

- What does it take to achieve the outcome you've selected?
- Who has achieved that outcome before and how did they do it?
- Which interventions have proven to be effective on this social issue?
- Which interventions have proven to be effective with this target population?
- Are these interventions replicable in your locality?

As you do the initial work to answer these questions and identify the interventions that might work best, keep in mind that there are different ways that you can find "effective" interventions. For example, you may consult an evidence-based practices database in your field. Another option would be to find an organization that has a strong track record in working with the individuals and/or social groups that make up your target population. Another example might be seeking out organizations that have qualifications in tackling the same social issue elsewhere.

¹⁹ Kennedy, Chinaro, et al. "Primary Prevention of Lead Poisoning in Children: A Cross-sectional Study to Evaluate State Specific Lead-based Paint Risk Reduction Laws in Preventing Lead Poisoning in Children." *Environmental Health* 13.93 (2014): 1-10. Web. 14 July 2015.

As Greater Cleveland leaders develop a housing-related outcome, they may also consider potential perverse incentives associated with that outcome (i.e., incentives that go against the target population's well-being). For example, an outcome of fewer houses with lead hazards may incentivize an external organization to pursue wide-scale development and gentrification in the affected areas, which would displace low-income families in a city with limited affordable housing. It is important that leaders think about structuring the outcome with appropriate restrictions or specifications that eliminate the possibility of counterproductive or harmful behavior, such as requiring arrangements to keep housing in the community affordable and available to families who reside there.

Determine if there are interventions that can achieve the outcome

To achieve an outcome of more lead-safe houses, the intervention is relatively clear: conduct widespread and systematic home remediation in the communities most affected by lead-related issues. There are multiple forms of remediation, including demolition, complete paint removal, and making a housing unit lead-safe by focusing on windows and doors.

Below are two possible interventions for reaching that outcome. Both approaches allow for more than one external organization to participate and deliver services at any one time.

Approach 1:

- The payor conducts assessments of housing units in the Greater Cleveland area and identifies houses that would benefit from lead remediation; criteria could include year of construction, whether a child has been poisoned in the house before, and whether a child under the age of four lives in the house, among other considerations
- The payor classifies houses into bands based either on the risk of the house poisoning a child (e.g., whether a young child lives in the home or will likely live there in the future) or on the level of difficulty and cost of the work to remediate the house; if the former, the payor may work closely with public health officials and experts to determine how best to develop a classification system that clearly and accurately delineates the different levels of risk and urgency

A strong and established evidence base exists for what it takes to prevent a child from getting poisoned by lead: making a home with lead-based paint hazards safe to live in. In some cases, this may mean changing out windows and removing lead products; in other cases, full abatement of the property may be needed to make sure that no future lead exposure will occur. Once you do that, you prevent future occupants from getting poisoned. Many cities and states across the United States have implemented home remediation programs in affected communities with great rates of success, and there are ways for organizations in many geographic areas to become certified in lead remediation.

While home remediation is possible through traditional government contracting processes, a PFS project allows the government to shift the work and risk of recruiting property owners to sign up for remediation to an external organization. Moreover, compared to traditional housing remediation, which is done one housing unit at a time, a PFS project that seeks to remediate a large number of homes allows for savings through economies of scale in procurement and pricing by an external organization.



- The payor bundles housing units in batches of 50 and allocates that bundle to an external organization for remediation
- The external organization persuades homeowners and occupants to allow for work to be conducted and provides alternative housing for occupants during the work period
- The external organization conducts remediation
- The payor conducts site visits to verify that the work is complete and meets standards, and the occupants return home
- The payor releases payment to the external organization for each house completed within an 18-month period from initial allocation of housing units; payment follows a monthly schedule based on the number of housing units completed each month
- Once the external organization has fewer than ten housing units remaining, it gets a new batch of 50 units allocated to it

Approach 2:

- The payor bundles housing units in batches of 100 and allocates them to an external organization; the payor does not identify houses that need remediation specifically, just those that fall in the chosen geographical area
- The external organization conducts site visit to identify housing units that would benefit from remediation and puts them in bands based on level of risk or difficulty (many units will not qualify)
- The external organization submits a list of houses to payor with bands
- If the payor wants to audit any housing unit's difficulty or priority level, it can do so within 30 days of the list being submitted; if there is evidence of systematic misclassification, the external organization is removed from the list of external organizations eligible to participate in the PFS project
- The external organization persuades homeowners and occupants to allow for work to be conducted, and provides alternative housing for occupants during the work period
- The external organization conducts work
- The payor conducts site visits to verify that the work is complete and meets standards, and the occupants return home
- The payor releases payment to the external organization for each housing unit completed within an 18-month period from initial allocation of units; payment follows a monthly schedule based on the number of units completed each month
- Once the external organization has fewer than 20 housing units remaining, the payor allocates to it a new batch of 100 units

Identify potential payors and champions

Payors. The payor should have a stake in helping the target population, the ability and resources to fund the outcome, and a commitment to helping the external organization and other potential participants achieve the outcome. An additional and important qualification for a payor is strong leadership. As launching PFS projects requires substantial time, and commitment, a payor must be able to initiate the process of developing a PFS contract and keep that momentum going throughout the process.

Key questions to consider:

- Are there agencies whose missions align with the outcome?
- Are there agencies that would see savings from achieving the outcome in the short, medium, or long term?
- Are there agencies that are open to using innovative, performance-based approaches?

If the potential payor you have identified is not permitted to make future funding commitments, you could consider initiating the process of developing legislation that would enable it to commit to multi-year performance contracts. For more on legislation, see Phase 4 and Appendix C.

Some payors from existing PFS projects include those listed in the table below.

Table 2

Pay for Success Project	Payor	Payor Type
ABLE Project for Incarcerated Youth (New York City, NY)	City of New York	City government
Asthma Management (Fresno, CA)	The California Endowment	Foundation
High-Quality Preschool Program (Salt Lake County, UT)	Private and public entities, including United Way of Salt Lake, Salt Lake County and the State of Utah	County and state governments, private entities
Juvenile Justice, Job Readiness, and Recidivism Reduction (MA)	Commonwealth of Massachusetts, US Department of Labor	State government
Partnering for Family Success (Cuyahoga County, OH)	County of Cuyahoga	County government

Identify potential payors and champions

Payors. When a child is poisoned by lead, s/he may

- Suffer damage to the brain and other organs, depending on the level of poisoning, requiring **healthcare services** to remove lead from her system and treat the damage effected by the lead poisoning;
- Develop cognitive and developmental impairments, such as ADHD, requiring **special educational services and developmental interventions**;
- Develop behavioral, impulse control, and aggression problems, which places his/her at greater risk of having encounters with the **criminal justice** system; and/or
- Suffer learning disabilities that inhibit long-term educational and professional performance, decreasing his/her **lifetime earning potential**.

Each of these consequences incurs costs to different organizations in Greater Cleveland, and each of these organizations could potentially serve as payors for a lead remediation-based PFS project. The table below lists the different groups, agencies, and organizations that incur costs from childhood lead poisoning.

Table 3

Group	Costs
Hospitals and healthcare systems	Doctors' visits, hospital stays, lead tests, chelation treatment, ADHD treatment
Medicaid	Lead screening and follow-on tests, lead questionnaires, environmental inspections, and chelation treatment for eligible children
Cleveland Metropolitan School District Cuyahoga County Public Schools	Special education services, including special education teachers, counseling, specialists
Cuyahoga County Juvenile Court Cuyahoga County Public Safety & Justice Services	Detention services for juveniles, legal and administrative services, victim services
City, county, and state government	Lowered lifetime earning potential (lower tax base for cities and states)



Action: Determine which organizations in your area incur costs from the problem of lead poisoning and assess whether the costs are significant enough to encourage an organization to serve as a payor.

Decisions:



Select the organization(s) you want to approach concerning a potential role as payor

Champions. Equally important is having a champion in the payor organization—someone who will support the use of a new mechanism to introduce innovation and rigor into solving the social issue. It also helps to have compelling success stories from beneficiaries of services, who can testify to the impact of the programs. A PFS project only works if it has support from the city, county or state, including support from policymakers, relevant agency leaders, appropriators, budget officials, and technical experts. An administrative champion who can shepherd the process of launching the PFS project, is helpful. In some PFS projects city or state leaders, such as the mayor or governor, have vested their authority and support to a representative who then drives the process through to completion.

Champions. The Greater Cleveland community benefits from having several influential individuals who actively support lead poisoning prevention, support innovation and risk-taking in this space, and would be good candidates for leading a PFS effort. They can be found in the school systems, healthcare, the NGO community, and the city and county governments, among others places.

In the government, getting the mayor's or the county executive's support would go a long way in helping to launch a PFS project. However, to administer the day-to-day activities, one also needs champions who could own the project, dedicate the time and attention needed on a regular basis, and who has the authority to make decisions.

For the purposes of this case study, we suggest that individuals involved in launching a PFS project in Greater Cleveland engage the leaders of the local health departments, the Cuyahoga County Board of Health (CCBH) and the Cleveland Department of Public Health (CDPH). As the CDPH Director and CCBH Health Commissioner serve together as co-chairs for the Healthy Homes Advisory Council of Greater Cleveland, a working relationship focused on lead poisoning already exists. Both CCBH and CDPH are committed to the prevention of lead poisoning, and a PFS project on home remediation would help them to meet this mission, especially in light of dwindling federal funding.



Action: Identify local leaders who have been vocal about the need for more lead poisoning-related efforts, specifically around preventive services.

Decisions:



Select the local leader(s) you want to approach concerning a potential role as PFS champion





Phase 3: How do you create a Pay For Success arrangement?

Phase 3 assumes that based on the results of Phase 2, a PFS is appropriate for the problem you wish to solve and that you're interested in taking the steps necessary to create an actual PFS project. The steps outlined below are similar to those in Phase 2, but Phase 3 takes a deeper dive into the information and focuses on accessing and using real data to inform PFS-related decisions. The process is iterative and not linear, as some of the issues you will examine in these steps will overlap with others, raise more questions, or require you to revisit answers to previous topics. This is the nature of setting up a PFS project.

Understand the target population

Earlier, you identified the group that the PFS project would help. For this portion of Phase 3, you will focus on using available data to (1) confirm your hypothesis about who the target population is, and (2) deepen your understanding of the target population and how it is affected by the problem you wish to address. By identifying the right group and better understanding why and how the social issue affects them, you will be well equipped to build a PFS project that has tremendous positive impact on the target population.

Information on the potential target population can be gathered from a number of sources, including, among others, academic studies; city, county, or state databases; news articles; and reports from organizations that work on the same social issue or with the same population.

Key questions:

- Which individuals or groups of people are most affected by this social issue?
- What major characteristics define this target group?
- How large is the population? Where is the population?
- How is this group currently served by the government?
- What is it about this population that leads them to need costly social services?
- What social, environmental, or contextual factors are most likely to influence the behavior of this group of people?
- How do you reach this group?

When studying the target population, the goal is to come up with a clear definition of who is in the target group (i.e., what criteria you will use to define who is in the target group), who will be the beneficiary of the PFS project, and why. As discussed earlier in this guide, the use of GIS mapping may

Understand the target population

The next step is to analyze existing data to better understand the individuals and families in Greater Cleveland who most often fall victim to lead poisoning. Relevant data includes but is not limited to those listed in the table below.

Table 4

Data	Source	Description
Lead prevalence/testing data (2012)	Cuyahoga County Board of Health	Shows how many children demonstrated elevated blood lead levels in a given year based on the lead tests administered
Housing stock data (2010)	U.S. Census	Provides information (e.g., age of housing, occupied versus vacant, rental versus owner occupied) about the housing units in a particular geographic area
Median household income (2006–2010)	American Community Survey	Outlines the median household income, which helps identify families who are likely to live in old, deteriorating housing units that are in need of remediation
Population-demographic data (2010)	U.S. Census	Describes the population in a particular region and associated characteristics (e.g., total population, population by age group)

help to do that. Try to define a group that is large enough to justify services but small enough that the project will have a measurable impact. A sample size that is too small will be difficult to evaluate against an outcome, and a group that is too large may lead to the project having too diffuse of an effect to measure.

In the United States, at least 3.8 million households have children living in them that are being exposed to high levels of lead.²⁰ Approximately half a million children ages 1–5 have elevated blood lead levels above 5 micrograms per deciliter (µg/dL), the reference level at which CDC guidance suggests public health actions be initiated. Lead poisoning disproportionately affects low-income populations, those who live in older housing (i.e., homes built before 1978), and non-Hispanic Black communities.²¹

*More national-, state-, and county-level information is available through the Centers for Disease Control and Prevention’s Childhood Blood Lead Surveillance (CBLIS) program and the **American Community Survey** from the **U.S. Census Bureau**. State and local health departments may collect lead prevalence data, which can help identify where lead-poisoning problems occur. Lead prevalence information could also be found at local hospitals, pediatric healthcare facilities, and school districts, which may necessitate creating data-sharing agreements with **hospital systems** and/or **school districts**.*

Fortunately for the Greater Cleveland area, Case Western Reserve University has an impressive, publicly available central data repository that helps to aggregate most of the relevant data. In other cities, aggregating this data may require consulting and collecting from a number of different sources (potentially at different levels of government), and extrapolating from national-level data, such as the CDC’s National Childhood Blood Lead Surveillance System (CBLIS). Obtaining access to detailed information may also require developing data sharing agreements, which can prove to be an extensive and sometimes expensive effort.

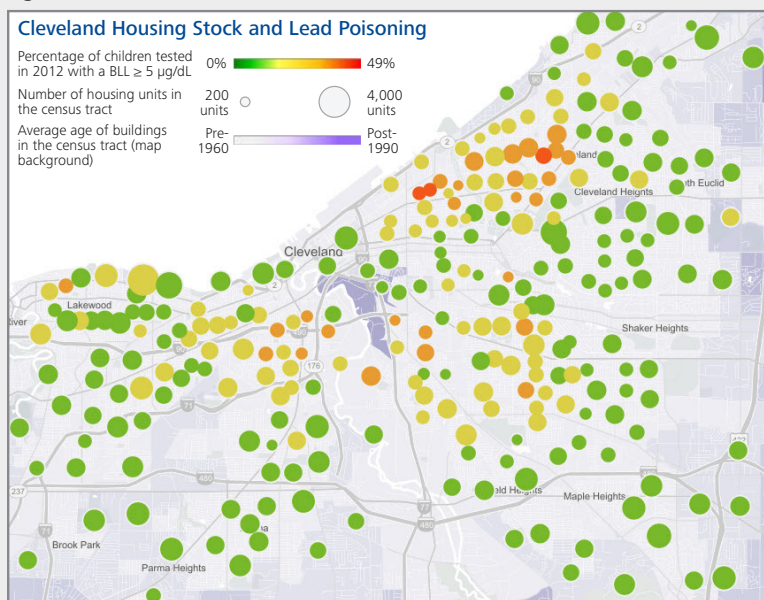
Action: Aggregate all of the health and housing data collected to gain a better understanding of how lead poisoning affects your area. Possible data includes the following:

- Lead prevalence at the housing-unit level
- Age of housing
- Median household income
- Population demographics

Decisions:

- ✓ Decide on the target population you wish to help with the PFS project, defining specifically who (or in this case, which houses) is included, the characteristics that identify the group, and how large the group is

Figure 1



Combining the data described above and displaying it using a data-visualization program paints a clearer picture of how large the target population in Greater Cleveland is, where the target and at-risk population resides, and what the biggest behavioral barriers are to resolving the lead poisoning problem. The figure on the left, for example, illustrates Greater Cleveland’s data at the census-tract level.

The analysis shows a direct correlation between the age of housing, household income, and lead prevalence, and may enable the potential identification of repeat offenders (i.e., housing units that have poisoned multiple children over time). Based on this analysis, leaders in Greater Cleveland have a better idea as to where to focus remediation efforts: the Greater University Circle area on and around the east side of Cleveland.

Action: Use a data-visualization tool, such as Tableau, to visualize your aggregated data and help determine which high-risk area(s) you want to focus your remediation efforts on.

Decisions:

- ✓ Decide which geographic regions merit inclusion as part of a PFS arrangement focused on housing-stock remediation

20 Ibid.

21 “Healthy Homes and Lead Poisoning Prevention Program: Environmental Justice Frequently Asked Questions.” National Center for Environmental Health. July 2011. Web. 1 June 2015.

Establish an observable and measurable outcome

After conducting deeper analysis on the target population and the social issue, revisit the outcome(s) identified during Phase 2 and evaluate its merits based on the findings from your detailed analysis. Determine if the achievement of the outcome(s) is still what you think is needed to improve the lives of the people you want to help. If needed, modify your high-level outcome to reflect the findings from your analysis. Although the details of the outcome(s), such as specific quantitative indicators, will be finalized during contract negotiations with the external organization, you can establish at this stage the general outcome(s) that you would like to see achieved. The table below lists examples of outcomes that local and state government have used in their Request for Proposals.

Table 5

Request for Proposal	Outcome(s)
Illinois RFP: At Risk Youth (2013)	Provide greater community-based placement stability and reduce recidivism for high-risk crossover youths dually involved in DCFS and IDJJ Reduce recidivism, increase employment opportunities and job retention in livable-wage careers, increase high school graduation/GED certification, and increase enrollment in post-secondary education, technical, professional certification programs for justice-involved youths at a high risk of reoffending
Michigan RFP: Child and Maternal Health (2014)	Improve birth, health, and other outcomes of mothers and infants in Michigan's Medicaid population by reducing infant mortality, reducing pre-term, low, and very low birth weight, improving child and maternal health pre- and post-birth, and reducing Emergency Department usage
County of Santa Clara, CA RFP: Chronic Homelessness (2014)	Reduce chronic homelessness in the county and increase the quality of life of the chronically homeless by stabilizing them in supportive housing or other long-term housing situations and improving health, with the desired consequence of decreasing their use of emergency and other costly county services
Massachusetts RFR: Social Innovations Financing for Youth-Intermediaries (2012)	Reduce recidivism rates for youth aging out of the juvenile corrections system, increase positive outcomes for these youths including educational attainment, labor market success, and housing stability, and produce cost savings for Massachusetts that are at least equal to the expenditures on the program

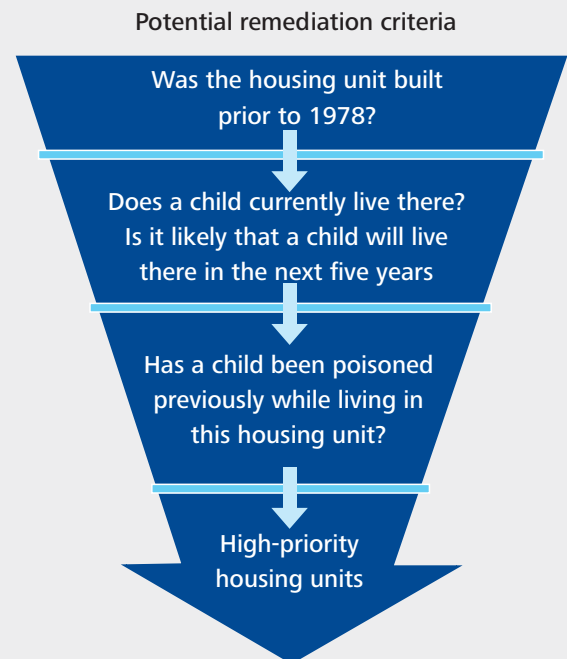
Outcomes for PFS projects must be observable and measurable. Observable means that the changes you are trying to effect—in behaviors, conditions, or infrastructure—can be perceived and verified by the parties to the PFS contract. Measurable refers to the ability to quantify and measure if the outcome is achieved. Identifying a PFS outcome that is both observable and measurable can be challenging, but doing so is essential to a project's success.

Establish an observable and measurable outcome

Equipped with the data above, leaders in the Greater Cleveland area can hone and refine the provisional outcome they set in Phase 2. A significant reduction of lead-hazard houses remains a feasible and logical outcome. (Specific outcome measurements, such as the percentage or rate of reduction, will be determined during the contract negotiation process.) However, with the new data, leaders know that to achieve the greatest impact, they should set an outcome that focuses on the Greater University Circle area and surrounding neighborhoods, where the need is greatest. They also know that remediating a set of structurally sound houses that have certain characteristics is more likely to address the lead poisoning problem than remediating all homes in the area. To ensure the external organization focuses on the right geographic areas and housing units, the payor should include in the PFS contract the eligibility criteria for a housing unit to be considered for remediation (see sample criteria in the figure below). It may also be beneficial to include language that stipulates that remediation can only take place if the qualified housing unit is structurally sound.

Given that the most affected areas are neighborhoods where primarily low-income families reside, it is important to think through safeguards they could build into the contract to protect these families' well-being. Gentrification and displacement of poor families from their communities are real risks that could arise from a housing-related outcome, and leaders will need to consider these risks.

Figure 2



In many social programs, the ultimate goals are long term, and success is far in the future. Given the limited timeframes of PFS projects (most PFS projects developed in the United States have had durations ranging from three to eight years), long-term outcomes may not be feasible, and you may wish instead to set an intermediate outcome, a shorter-term result that you know with a high degree of certainty will lead to the achievement of the long-term outcome.

A typical PFS outcome such as a reduction in childhood lead poisoning cases would pose a couple of related challenges. First, the effects of lead poisoning manifest themselves differently in each child and can be difficult to observe without testing. Second and related, not all children are tested on a consistent basis, so it is difficult to measure if and to what degree an intervention results in a reduction of lead poisoning. In many places, lead poisoning screening is inconsistent, complicating the ability to gauge how much lead poisoning has been reduced (for more on methods for improving screening rates, see Appendix B).

Thus, instead of setting an outcome of a reduction in childhood lead poisoning rates, a payor may elect to use an intermediate (and closely related) outcome that, if achieved, is known to result in a significant reduction in lead poisoning. For example, an outcome could be a reduction in the number of homes that pose lead-hazard risks to a child, age six and under, by identifying and remediating at-risk homes before they poison a child.

Once you have an outcome that is observable and measurable within an appropriate timeframe, think about setting parameters or requirements around the outcome to ensure that the external organizations and providers serve the target population and are not incentivized to employ behaviors that may be harmful to that population. Payors may also want to include rules or guidelines that dissuade the external organization from engaging in acts that help it “cream skim,” or serve the people most likely to achieve the outcome and not the most needy or difficult ones.

If the outcome is a reduced number of homes with lead-related hazards, the PFS contract should include a requirement that the external organization demonstrates that the house poses a lead hazard risk to the target population. Potential guidance to include for service providers in identifying eligible homes in a PFS remediation project may include, for example, that only units constructed prior to 1978, have had a previous case of childhood lead poisoning, or houses a low-income child less than four years old can count toward the outcome.

It is important to avoid defining outcomes that could be achieved by sheer chance. For example, the payor should avoid setting a workforce development or re-employment outcome that is dependent or highly influenced by the strength of the state’s recovery from a recession. Similarly, external organizations will



want to protect themselves against the risk that factors beyond their control will make it increasingly hard for them to achieve outcomes.

To make it easier to determine whether an outcome is achieved by the intervention or by chance, payors and external organizations need to ensure that the sample sizes are sufficiently large and that the number of people served is ample enough to reduce the chances of attributing results to coincidence or chance. You can also mitigate against risks by using control and comparison groups.²² This is what the Peterborough prison did. The government set an outcome of 7.5 percent reduction in the rate of recidivism amongst the target population, relative to a comparison group of similar prisoners discharged from other prisons.

It is important for the payor to think carefully about the implications of the outcome and structure outcomes so as to reduce the incentive for perverse behavior. Poorly aligned or articulated outcomes can introduce perverse incentives, or incentives to engage in activities that are not in the interest of the target population or that could harm the population. At this phase, a critical consideration is whether an outcome would produce perverse incentives and how to refine outcomes that do not lead to perverse incentives.

If a PFS project were to focus on housing-stock remediation, participants would need to consider potential perverse incentives of such a goal.

One possible perverse incentive to consider is gentrification, or the displacement of low-income families by middle-class or affluent people as a result of renovations and renewal that increase property values and price out poorer groups. In such a case, leaders could include contractual agreements with landlords to rent to low-income families with children for a period of years at a stable and affordable rate. Whatever the perverse incentive may be, PFS arrangements should include specifications or requirements that help to mitigate the risk of perverse incentives.

²² For more, see: Kohli, Jitinder, Douglas J. Besharov, and Kristina Costa. "Inside a Social Impact Bond Agreement." Center for American Progress, 3 May 2012. Web. 1 June 2015.



Calculate the value of the outcome and determine the financial feasibility of Pay for Success

At the heart of PFS is the payor’s promise to pay for the achievement of an outcome. The amount that the payor promises to pay will affect nearly every component of the project: the financial feasibility, external organizations’ and investors’ willingness to participate, and the scale of the impact, among other considerations. Thus, developing a complete and accurate assessment of the outcome’s value is incredibly important. It may be helpful to consult with a health economist to construct cost estimates based on local conditions.

Calculate the value of the outcome and build a financial model

How to price an outcome remains a topic of debate among PFS practitioners. Many PFS projects in the United States have based the value on an assessment of “cashable savings,” or the amount that the payor will save if the outcome is achieved. More recent thinking, however, has recognized the limitations of this approach. Namely, cashable savings represent only a part of the outcome’s value and fail to take into consideration well-being benefits (i.e., the value of other non-cashable benefits to society) and the social priority.²³ A more holistic and arguably realistic representation of the outcome’s value emerges from considering all three factors.

Cashable savings. Cashable savings is the amount the payor (traditionally government) will save if and when the outcome is achieved. These savings are normally reflected on a budget line, and they can range from low to high levels based on the outcomes. As the Centre for Social Impact Bonds describes, “For small changes in outcomes, there are likely to be low levels of cashable savings. The fixed costs will not change... If there is a large change in outcomes the cashable savings could be significant and could include both fixed and variable costs. For example, if an intervention reduced youth offending to the extent where a youth offending institution could be closed, this would generate cashable savings from both fixed (selling the building) and variable (utilities) cost.”²⁴

Speaking with local experts and practitioners who work on the issue will help you ascertain the sectors of society that are affected and the government programs that expend funds on the issue. Once you have compiled a list of existing programs and services, the next step is to examine the funding streams and budgets behind these programs, which will help identify the different agencies that would save from achieving the outcome. In reviewing these agencies’ budgets, you can begin to calculate how much would be saved in future years from a decreased need and use of remedial programs and services currently dedicated to addressing the social issue. Understanding the cashable savings will help you to identify the most suitable payor(s) for the PFS project.

23 Kohli, Jitinder, Megan Golden, Joe Coletti, and Luke Boshier. “From Cashable Savings to Public Value.” Center for American Progress. 1 September 2015.
24 “Cashable savings to the commissioner.” Centre for Social Impact Bonds, Cabinet Office UK, 22 April 2013. Web. 22 July 2015.

Calculate the value of the outcome and determine the financial feasibility of Pay for Success

Calculate the value of the outcome and build a financial model

Cashable savings. In the Greater Cleveland area, cashable cost savings primarily accrue to three systems: Medicaid, Greater Cleveland’s education systems (Cleveland Metropolitan School District and Cuyahoga County Public Schools), and the Cuyahoga County Juvenile Court system.

Medicaid: Direct costs of lead poisoning include the costs of screening, follow-up testing, follow-on questionnaires (for children with <10 µg/dl), environmental inspections (for children with ≥10 µg/dl), and treatment (for children with ≥45 µg/dl). The table below presents the estimated cost covered by Medicaid in 2012 for Cuyahoga County.

Table 6

Blood lead level	# of children	Screening	Follow-up tests ²⁵ (~2–4)	Follow-up action	Chelation (one-week treatment)
5–9 µg/dl	2777	\$50	\$50	\$100	N/A
10–14 µg/dl	712	\$50	\$50	\$850	N/A
15–19 µg/dl	246	\$50	\$50	\$850	N/A
20–24 µg/dl	122	\$50	\$50	\$850	N/A
25–34 µg/dl	165	\$50	\$50	\$850	N/A
35–44 µg/dl	17	\$50	\$50	\$850	N/A
45+ µg/dl	12	\$50	\$50	\$850	\$135,000

In 2012, it is estimated that lead poisoning cost Medicaid between

25 A child with elevated blood lead level requires ongoing monitoring of BLL along with the appropriate medical, educational, and environmental interventions. The CDC recommended schedule of monitoring can be found in: “Advisory Committee on Childhood Lead Poisoning Prevention. Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention. Rep. N.p.: Center for Disease Control and Prevention, 2015. Web.

A large and established body of research has shown that lead poisoning incurs a heavy cost on several parts of society over time. By impairing a child's physical health, cognitive development, and executive functions, lead poisoning increases a child's needs for healthcare, therapy, and special education; and it increases the chances that the child will have an encounter with the law. These consequences compound costs for healthcare, education, the justice system, and the economy (in the form of lowered lifetime earnings). Thus, the government would see cashable savings to Medicaid, local school districts, and the criminal justice system from a significant reduction or the elimination of lead poisoning among children.

By reviewing and analyzing the budgets of each of these agencies and systems, you can calculate the annual cost savings. Below are some general formulas for calculating cashable savings for lead poisoning.

Table 7

Category	Description
Medicaid	<ul style="list-style-type: none"> Use health department records to identify the number of children with elevated blood lead levels at three levels: 5–9 µg/dl, ≥10 µg/dl, ≥45 µg/dl Determine which children with elevated blood lead levels are eligible for Medicaid Multiply number of cases at each blood lead level by costs and frequency of associated activities (e.g., lead tests, questionnaires, environmental inspection, chelation) based on your state's Medicaid reimbursement structure Use sensitivity analysis to calculate lower/higher estimates based on lead-testing schedules (e.g., lower estimate may assume one lead test per child; higher estimate may assume adherence to CDC guidance)
School District	<ul style="list-style-type: none"> Use health department records to identify the number of children with elevated blood lead levels Analyze budget and cost data to determine the annual, per-child cost of special education above and beyond the cost of traditional education Calculate very conservative estimates by using J. Schwartz's formula: <ul style="list-style-type: none"> Cost = 20% x # of children with ≥25 µg/dl elevated blood lead level x 3 (years of Sp. Ed.) Conduct sensitivity analysis to calculate the lower/higher estimates

*continued on next page

\$2.0 million and \$5.5 million.²⁶ The low range of the estimate assumes that each child received only one lead test (screening), while the high range assumes that the County adhered to CDC's guidance for follow-up testing (see table below).

These figures are based on the number of children who are screened for lead poisoning, and local experts believe that only approximately 60 percent of children are screened for lead. As a result, actual costs and forecasted savings may be higher than the estimates above suggest. Additionally, based on conversations with health department officials in Greater Cleveland, the data assumes that 75 percent of the lead poisoning cases reported in Cuyahoga County are covered under Medicaid; actual numbers may be higher.

Table 8

Venous blood lead level µg/dl	Early follow up testing (2–4 tests after identification)	Later follow up testing after blood lead level declining
≥ Reference value–9	3 months*	6–9 months
10–19	1–3 months*	3–6 months
20–24	1–3 months*	1–3 months
25–44	2 weeks–1 month	1 month
≥ 45	As soon as possible	As soon as possible

Action: Contact your local Medicaid representative, hospitals, and/or health department to get a better understanding of the cost of lead poisoning to Medicaid in your area; possible eligible reimbursements include the following:

- Lead testing
- Investigation/inspection of housing units
- Case management work with children and families
- Medical treatment and cost of medications (e.g., chelation)

²⁶ Children will continue to be screened for lead poisoning, so the costs associated with screening would not be "saved" as a result of a successful PFS project focused on housing-stock remediation; continuing with the 2012 example highlighted above, projected savings without screenings would equate to approximately \$1.15 million annually

- | | |
|------------------|---|
| Criminal Justice | <ul style="list-style-type: none"> Determine the cost of your county's juvenile justice system each year Multiply cost by Levin's formula for population attributable risk: <ul style="list-style-type: none"> $PAR = Pe (RRe-1)/[1 + Pe (RRe-1)]$, where Pe is the prevalence of the exposure (i.e. proportion who have elevated blood lead levels) and RRe is the relative risk of effect due to that exposure (i.e., odds ratio that someone in the juvenile justice system has elevated BLLs compared to the overall high school population) Multiply value by discount rate to account for incurring costs in the future |
|------------------|---|

Well-being benefits. Well-being benefits are the improvements for individuals and communities that accrue over time from achievement of the outcome. The value a payor places on these benefits arises because the payor wishes to improve the life outcomes of individuals (such as their health, education, or employment) and/or improve the communities in which these individuals live. Examples include lower crime rates, healthier communities, and well-educated and productive workforces. While these are not immediately "cashable," they may be quantifiable and should be considered in the valuation of the outcome. The Washington State Institute for Public Policy provides an economic model that values the benefits and costs of an intervention over time. It includes multiple types of benefits, including, for example, benefits to crime victims, and economic effects of high school graduation.²⁷

One of the greatest benefits from preventing lead poisoning accrue in the form of higher lifetime earning potential for the child who is not poisoned. Other well-being benefits that flow from the outcome include a lower cost of crime (lower direct victim costs, fewer legal proceedings and incarcerations, lost earnings to both victim and perpetrator), and lower rates of risky behavior, such as cigarette smoking and behaviors that lead to repeated teenage pregnancies.

One national study compiled the full range of well-being benefits for lead paint hazard control, including benefits to healthcare, lifetime earnings, tax revenue, special education, attention deficit-hyperactivity disorder, and the direct costs of crime; and it found that each dollar invested in lead paint hazard control resulted in a return of \$17 to \$221, or a net savings of \$181–269 billion for a cohort of children six years of age and under.²⁸

Social priority. Non-governmental payors may see the focus of the PFS as a priority and thus price the outcome higher. For example, the Affordable Care Act (ACA) established new standards that nonprofit hospitals must meet. Among the new requirements are conducting a community health needs assessment every three years



Special Education: The most widely used formula for calculating the additional costs of special education from lead poisoning comes from Dr. Joel Schwartz's 1994 study, which found that 20 percent of children with elevated blood lead level $\geq 25 \mu\text{g/dl}$ will need special education for an average of about three years. Our calculation uses this formula but adjusts for emerging science that indicates exposure to lead poisoning causes brain damage at much lower blood lead levels, resulting in children needing special education services at lower levels of lead poisoning and for longer periods.

Using the Cuyahoga County Board of Health's 2012 lead poisoning prevalence data and Schwartz's formula, we conducted a sensitivity analysis that takes into account two primary variables: the increased likelihood that a child with an elevated blood lead level (starting at $5 \mu\text{g/dl}$) needs special education compared to a child without an elevated blood lead level and the number of years of special education that a child would need (anywhere between three and nine). Assuming the additional annual cost per pupil for special education in Cleveland is approximately \$10,000,²⁹ we calculate that lead poisoning costs the Cleveland schools anywhere between **\$1.3 to \$16.7 million** per year, which represents up to nearly 10 percent of what the Cleveland Metropolitan School District spends annually on special education (\$172 million).³⁰

Action: For conservative estimates, calculate the cost to special education by using J. Schwartz's formula:

$0.20 \times n \times C \times 3$, where

- n = number of children with elevated blood lead level $\geq 25 \mu\text{g/dl}$
- C = annual additional cost of special education (the average additional annual cost of special education in the United States is ~\$9,400)

For a broader range of estimates, you can conduct a sensitivity analysis adjusting for the following variables based on information in your locality:

- Increased chance of special education (e.g., 0.2 to 0.5) starting at $5 \mu\text{g/dl}$
- Years of special education needed (e.g., 3 to 9)

27 Gould, Elise. "Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control." *Children's Health* 117.17 (July 2009): Environmental Health Perspectives. Web. 1 June 2015.

28 Ibid.

29 O'Donnell, Patrick. "Cleveland Schools' Spending per Student Ranks High, but so do Students' Needs." *Cleveland.com*. The Plain Dealer, 29 Oct. 2012. Web. 1 June 2015.

30 Cleveland Municipal School District. *Comprehensive Annual Financial Report*, 30 June 2013. Web. 1 July 2015.

and developing an implementation strategy to meet those needs. While the ACA gives hospitals significant leeway for meeting the “community benefit” requirement, one option for hospitals is to participate in a PFS project that addresses the needs identified in the community needs assessment. A hospital system can, for example, choose to serve as a payor in a PFS project to improve community health, and in doing so, the hospital may be willing to pay more than the cashable savings amount in order to achieve the specific health goals.

In addition, the financial benefits to non-profit hospitals of maintaining their tax exemption and non-profit status are considerable. These benefits include federal income tax exemption, use of federally tax-exempt debt (bond financing), federal deductibility of charitable contributions, state corporate income tax exemption, state sales tax exemption, and state and local property tax exemption. According to one study, the aggregate financial benefits from federal, state, and local tax preferences afforded to non-profit hospitals and their supporting organizations in 2002 alone was \$12.6 billion.³¹

For a large non-profit hospital system, the financial benefits are significant. It should be noted, however, that the annual financial benefits to each hospital for maintaining its tax exemption may vary significantly depending on a range of factors, specific to the hospital’s revenues, losses, and investment performance and plans in a particular year.

Juvenile justice: Using the methodology of Stefanek et. al. as performed in Mahoning County, Ohio,³² we used ML Levin’s formula for population attributable risk ($PAR = Pe (RRe-1) / [1 + Pe (RRe-1)]$, where Pe is the prevalence of the exposure, i.e., proportion who have elevated blood lead levels, and RRe is the relative risk of effect) to reach an estimated population attributable risk that 9 percent of adjudicated delinquent cases can be attributed to lead poisoning. Multiplying that by the annual cost of Cuyahoga County’s juvenile justice system each year, approximately \$45 million,³³ we estimate that lead poisoning costs the Cleveland juvenile justice system approximately **\$3.9 million** per year (or about \$2.8 million, discounted to assume that children will enter the juvenile justice system in 12 years).



Action: To calculate the cost to the juvenile justice system:

- Collect budget information from the local juvenile justice system or from the local criminal justice system
- Identify the annual cost of local juvenile justice system
- Calculate the population attributable risk, using ML Levin’s formula: $(PAR = Pe (RRe-1) / [1 + Pe (RRe-1)])$
- Multiply the annual cost of local juvenile justice system population attributable cost

Table 9

Government Entity	Estimated Annual Cost
Medicaid	\$2.0 to \$5.5 million
Cleveland School Systems	\$1.3 to \$16.7 million
Criminal Justice System	\$3.9 million

Well-being benefits. Not included in the cashable savings to Greater Cleveland are the other benefits to society and individuals that transpire and accrue over time. Some of these are quantifiable, and some less so, but are still important when evaluating the outcome price. These benefits include higher lifetime earning potential for each child who is not poisoned, as well as lower costs of crime, and lower rates of risky behavior. In other words, by preventing cases of lead poisoning, Greater Cleveland would have less costly, more productive, and healthier communities.

Our calculations estimate that for each cohort of children age 0–6 who are affected by lead poisoning, Greater Cleveland sees a loss of about \$135 million dollars in lifetime earnings. We estimated the lifetime earnings loss by using E. Gould’s study, which assumes

31 Somerville, Martha H. “Community Benefit in Context: Origins and Evolution—ACA §9007.” The Hilltop Institute (June 2012).

32 Stefanak, Matthew, Joe Diorio, and Larry Frisch. *Special Report on Lead Poisoning in Cleveland: Cost of Lead Poisoning to Taxpayers in Mahoning County, Ohio*. Rep. Vol. 120. N.p.: Public Health Reports, 2005. Web.

33 This assumes that juvenile justice system costs are perfectly scalable; a 9 percent decrease in cases leads to exactly 9 percent decrease in juvenile justice costs.



that for each point of lowered IQ, there is a loss of \$17,815 in 2006 dollars in present discounted value of lifetime earnings, or \$20,289 in 2012 dollars. Based on the study by Lanphear et. al., which quantifies the IQ point loss per $\mu\text{g}/\text{dL}$, we calculate the total loss of IQ points among children 0–6 caused by lead poisoning, using the following figures:

Table 10

BLL ($\mu\text{g}/\text{dL}$)	Number of children age 0–6 with BLL	Average BLL	Average IQ point loss per $\mu\text{g}/\text{dL}$ of lead	Total IQ point loss caused by lead
	(a)	(b)	(c)	(a*b*c)
5–9	1861	5	.513	4773
10–14	443	12	.19	1010
15–19	163	17	.19	526
≥ 20	151	20	.11	332

There are also other well-being benefits. The children who are not poisoned will go on to have higher quality of life. Their families will avoid the increased private costs associated with having children with lead poisoning (e.g., expenses related to lead poisoning and opportunity cost of having a child with lead poisoning).

Social priority. Lead poisoning has been a well-known, long-standing problem in Greater Cleveland and one that disproportionately affects the area’s most vulnerable populations—children and the poor. The issue affects multiple sectors of government and has long-term effects on society. Private sector services and outreach over the years have been insufficient in meeting the needs of this affected population, namely the need to make more affordable lead-safe housing units available.

Moreover, the resolve and commitment to fixing the lead problem in Greater Cleveland is high. The area’s anchor institutions, including the Cleveland Foundation, Cleveland Clinic, University Hospitals, and Case Western Reserve have all named lead poisoning prevention as a priority in their work.³⁴ As discussed on the left side of the guide, the ACA provides incentives for Greater Cleveland hospitals systems (e.g., University Hospitals System, Cleveland Clinic, MetroHealth System) to address the lead poisoning problem in the region.

Action: Calculate the loss of lifetime earnings for your area, by using E. Gould’s formula:

- Based on the table above, calculate the total IQ loss from lead poisoning among children 0–6 in your locality
- Multiply that figure by \$20,289, the loss of lifetime earning per IQ point

³⁴ Byrnes, Micki. “Cleveland Foundation Announces \$14.7 Million in March Grants.” WKYC.com. Tegna, 31 Mar. 2015. Web. 1 June 2015.

Calculate the cost of the intervention and develop a financial model

A successful financial model will bring together the value of the outcome (based on the factors discussed earlier) with the cost of the intervention. The primary purpose of the financial model is to demonstrate that the value of the outcome outweighs the cost of the PFS intervention and, thus, makes financial sense for potential bidders to pursue. Unless the cost of the intervention is likely to be lower than the price of the outcome, external organizations will not bid on the contract, and a PFS project won't work.

Determining the cost of the intervention in a lead poisoning prevention-focused PFS is slightly more straightforward than for other interventions because it focuses on a house and the physical remediation of that house. However, it still encompasses a wide range of expenses, such as the cost of hiring specialized personnel (e.g., trained contractors, certified lead assessors), as well as specialized administrative costs (e.g., costs to build GIS maps or a database to track remediation expenses). For other issue areas, determining the intervention's cost will be more complicated but can be accomplished through conversations with experts and practitioners as well as reviews of budget and historical data on implementing those interventions. Another option is to request such data by issuing a Request for Information (RFI) or Request for Proposal (RFP).

Determining the cost of a primary prevention-based intervention focused on homes differs from interventions in other issue areas. With primary prevention, the cost is essentially the costs associated with remediating a home. The cost to remediate will vary by unit, state and local standards, and the specific type of remediation used, but data concerning lead hazard control in various U.S. cities suggests that the average per-unit cost of lead hazard control is approximately \$8,000.³⁵ It is important to remember, however, that this average is simply that—an average. It may cost much less to remediate some units, and it may cost much more to remediate others. The payor may wish to consider designing a payment schedule that includes an incentive structure, such as higher payments for bigger houses or bonuses, that would encourage an external organization to undertake remediation of more difficult houses that pose risks to children.

³⁵ National Center for Healthy Housing and University of Cincinnati Department of Environmental Health. Evaluation of the HUD Lead-Based Paint Hazard Control Grant Program. U.S. Department of Housing and Urban Development Office of Healthy Homes and Lead Hazard Control, 1 May 2004. Web. 23 July 2015.

Local hospitals interested in meeting their “community benefit” requirement by serving as a payor in a lead-related PFS project may wish to consider the benefits of preserving their non-profit status when pricing the outcome.

All of these considerations may increase both the payor's willingness to pay for better lead-related outcomes and the valuation of the outcome.

Calculate the cost of the intervention and develop a financial model

The financial model should account for the projected costs of the intervention and the costs to the external organization of complying with any criteria that is established.

Based on conversations with local housing experts and practitioners, as well as data from remediation-focused grants in Greater Cleveland, the average per-unit cost of lead remediation is \$8,000. Convincing the owners and/or inhabitants of that unit to participate in a remediation program has its own costs and complexity. It is possible that the property owner and/or tenants have no interest in participating or do not know about lead remediation. With overhead and administrative costs, the costs of recruiting property owners and tenants, and providing temporary housing to families during remediation, that average cost figure may rise to about \$9,000 or \$10,000.

Based on historical data in Greater Cleveland, the per-unit remediation cost is the sum of three figures: (1) the number of windows in the unit multiplied by \$300 (the cost to replace a window), (2) the number of rooms in the unit multiplied by \$150 (the cost to clean a room upon completion and get it cleared by inspection), and (3) the number of square footage on the exterior of the housing unit multiplied by \$2 (the cost to address any issues associated with the exterior paint's condition). Leaders in the Greater Cleveland area can use this data to inform the categorization of housing units into the bands discussed previously (see Approach 2 earlier), if they choose to categorize houses based on the level of difficulty or cost.



Action: Use historical remediation data in your area to determine how much it costs to make a housing unit lead safe; potential costs include the following:

- Inspection or evaluation of the property
- New windows, window frames, doors, door frames, etc.
- Labor
- Displacement of tenants
- Cleaning and clearance (once the remediation is complete)

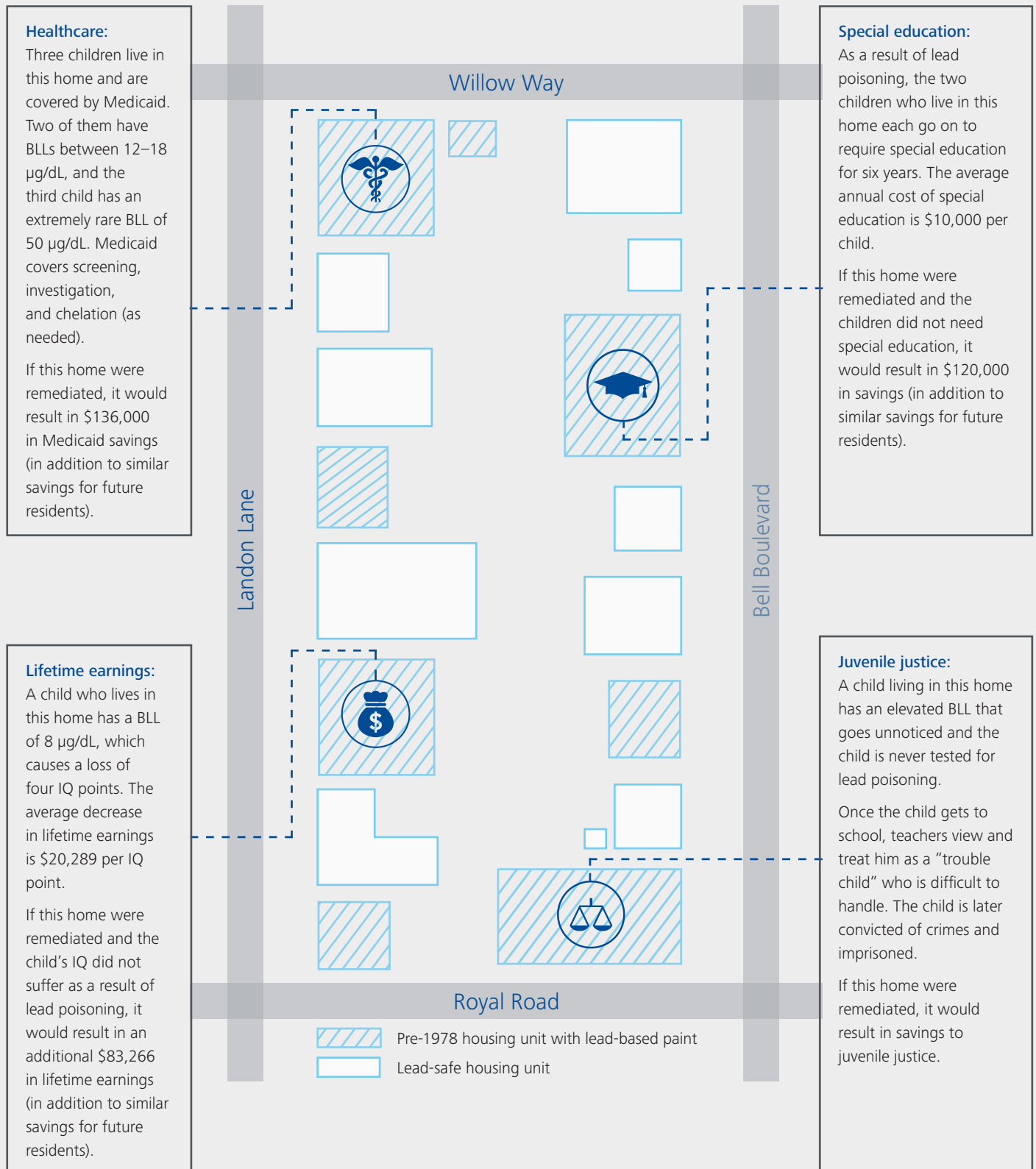
Decisions:

- ✓ Determine whether the financial model is acceptable to the payors and provides enough financial incentives for external organizations to draw bidders



What is it worth to remediate a block of homes?

The illustrative graphic below depicts a block of homes in the Greater Cleveland area and the estimated monetary and societal benefits that may be achieved by remediating unsafe housing. The average cost to remediate a home in Cleveland is \$8,000. As the illustrative example below describes, the monetary and societal benefits of remediation greatly outweighs the cost, particularly when taking into account benefits for future residents.



Engage potential payors to ascertain their interest and ability to pay

Normally, payors for a PFS project are organizations whose missions most closely align with the outcome. For example, in a PFS project that aims to reduce homelessness among veterans, suitable payors are probably the Department of Veterans Affairs and the Department of Housing and Development, whose missions are to care for U.S. veterans and create quality affordable homes for all, respectively. Oftentimes, these payors are also the same organizations that would accrue savings over time from achieving the outcome.

Once you have identified potential payors, you can engage them to assess their ability and interest in participating. This may require a process of educating them on PFS—its benefits, risks, requirements, and processes—and articulating how a PFS approach can advance the relevant organization’s mission.

In some cases, a single government agency will have the resources and the will to serve as the payor, so the selection of a single payor and the process of setting up the PFS payments will be relatively straight forward. In other cases, you may need to find multiple payors (multiple organizations that have an interest in the outcome) and develop a pool into which the payors can contribute. This may complicate the payment schedule but expands the potential impact of the outcome.

As shown in the cashable savings calculations, there are several potential organizations that may be interested in serving as payors for a lead-based PFS project: Medicaid, hospitals, local school systems, and juvenile justice systems. Healthcare foundations and more general philanthropic organizations may also have interest. Reducing the incidence and prevalence of lead poisoning among children would be in the interests of all these organizations. Parties may also wish to consider establishing a multi-payor pool.

Engage stakeholders, including champions

If the city, county, or state government do not see the social issue as a priority, it will be difficult to raise funds and pay for the outcome. If leaders or budget officials are opposed to using a novel, performance-based funding mechanism, it will be challenging, if not impossible, to get the PFS project off the ground. Oftentimes, having the backing of the mayor, county executive, or governor (or the confidence that you can secure it) will go a long ways to making a PFS project a reality.

A PFS project also requires an administrative champion—one who can shepherd the contract through bureaucratic processes and manage the project, with its many moving parts, through implementation. Negotiating and constructing a PFS contract is a months-long process. As PFS is a novel approach, few legal precedents exist, so constructing the contract entails a host of unique negotiations, decisions, and resources; experts expect that the process will be streamlined as more PFS contracts are written in the future. According to experts and practitioners who have undergone the endeavor, parties to the process will likely encounter delays, disagreements, and involved discussions to resolve legal, programmatic, and practical details. Having an administrative

Engage potential payors to ascertain their interest and ability to pay

Equipped with high-level data and budgetary information, leaders in Greater Cleveland can then approach the potential “saver” agencies and begin preliminary conversations to gauge their interest and ability to participate in a PFS project. Bringing supporting education materials is helpful, including materials geared toward educating the respective agency about what PFS is, the cost of lead poisoning to their specific agencies, and the benefits of using a PFS project to reduce those costs.

In each of these organizations, look for a natural ally to facilitate those meetings and champion the cause internally. For example, at Medicaid, the person who administers the payments for lead poisoning-related tests, medicines, and services, or the budget officer, could serve as a helpful partner. At Greater Cleveland schools, potential partners include special education administrators, the director of nursing, and principals of heavily affected schools.

Engage stakeholders, including champions

City and county support can help with the process of putting together a PFS arrangement.

An administrative champion in Greater Cleveland may be able to dedicate time and energy to managing the process of putting together a PFS project on a day-to-day basis. As mentioned earlier, the Cleveland Department of Public Health and the Cuyahoga County Board of Health are good candidates for this. Educating those offices first to make sure that staff members are well versed in PFS is important, as is educating potential participants and external allies on the lead poisoning problem in Greater Cleveland and how PFS can help to address the long-standing lead problem plaguing the city’s communities.

champion who can give his/her sustained attention, navigate decision making, hold parties accountable, and build consensus helps to mitigate the challenges inherent to building a legal contract for a complex contracting arrangement.

When researching potential issue areas and target populations for a PFS project, certain leaders and champions naturally emerge. These champions are often the vocal supporters of a cause, have good standing and influence in the community, and are bureaucratic operators who can get things done. They could be heads of government agencies, savvy technocrats, or better yet, mayors or governors. These champions are natural allies in developing a PFS project.

When it comes to lead poisoning, look for champions among the potential payor groups, including leaders in the public health, education, and juvenile justice systems. Each of these organizations has an interest in the reduction of lead poisoning in their communities, and they can help the process of developing a PFS arrangement by bringing their political capital and operational know-how to the table.

Educate other stakeholders and the public

PFS is still a relatively new concept, so it will be critical to engage potential partners, stakeholders, and the public early in the planning process. Using public education campaigns aimed at relaying information on what PFS is and how it can benefit the community will help facilitate the process of developing a PFS project and reduce the likelihood that outside factors will complicate or disrupt the process. Transparency and ongoing engagement are key. Educating stakeholders will also help foster support and enthusiasm for the issue area and project, which will be important because the process of putting together a PFS project takes a long time and requires sustained attention from leaders, officials, and decision makers.

A public education campaign can include conversations with affected communities, public and private meetings with civil leaders and service providers, educational communications campaigns.

PFS projects often need policy and financial support. As such, in other existing PFS projects, NGOs and issue advocates have become involved in raising awareness around the social issues.

At the end of Phase 3, you should have the major contours

Educate other stakeholders and the public

When it comes to educating stakeholders and garnering support for a potential PFS project, Greater Cleveland's leaders will have to educate the public on what Pay for Success is, what it is not, and what it can do to help address the long-standing problem of lead poisoning. Fortunately, for the Greater Cleveland area, there has already been a PFS project developed and implemented in Cuyahoga County.³⁶ Leaders can build on this project's success and lessons in educating stakeholders and bolstering their support.

Greater Cleveland's leaders may also begin to work strategically with partners and stakeholders who could play important roles in launching a PFS project. Table 11 outlines potential stakeholder groups in Greater Cleveland and areas where they can contribute. Informal conversations, public meetings, public media campaigns, and community outreach via schools and community leaders—all of these should be considered in Greater Cleveland's campaign to engage stakeholders.

³⁶ Field, Anne. "\$5M Ohio 'Pay for Success' Targets Homelessness and Child Welfare." *Forbes*, 5 Dec. 2014. Web. 8 June 2015.

of the PFS project in place, and the majority of the project development completed. With a good understanding of the target population, the outcome or the change you wish to effect, a general idea of the value of that outcome, and an educated group of stakeholders to support the project, you are ready to put the pieces together.



Table 11

Potential Stakeholders	Potential Roles
<ul style="list-style-type: none">• Cleveland Mayor and advisors• Cuyahoga County Executive and advisors• Nonprofit organizations focused on the target population, its welfare, and its housing	<ul style="list-style-type: none">• Manage PFS project and raise awareness on benefits of lead poisoning prevention
<ul style="list-style-type: none">• Cleveland Metropolitan School District CEO and School Board• Cuyahoga County Public Schools• Cleveland Clinic, University Hospitals• Cuyahoga County Sheriff & Corrections Center• MetroHealth System• Medicaid• U.S. Department of Housing and Urban Development• Cuyahoga Department of Development• Nonprofit organizations focused on the target population, its welfare, and its housing• Cleveland Tenants Organization• Neighborhood Housing Services of Greater Cleveland	<ul style="list-style-type: none">• Provide services or goods to individuals and families who suffer from lead poisoning
<ul style="list-style-type: none">• Mandel School of Applied Social Sciences, Case Western University	<ul style="list-style-type: none">• Manage data related to lead poisoning and the PFS project
<ul style="list-style-type: none">• Cleveland Foundation, Saint Luke’s Foundation• Federal Reserve Bank of Cleveland	<ul style="list-style-type: none">• Support lead poisoning prevention efforts and fund development in the Cleveland area

In creating the education materials and talking points for stakeholders, take the time to customize each conversation to the recipients’ specific needs and potential roles in helping the PFS project come to fruition. For example, educating government stakeholders may require more information about how PFS projects work with the budgeting process, whereas hospital systems or foundations may require more information about the use of data. The Greater Cleveland champions must be willing to dedicate time and resources toward this effort in order to give their PFS project the greatest likelihood of success.



Action: Create a list of key stakeholders and decision makers and make a concerted effort to educate them about PFS and its potential in your area; possible stakeholders include the following:

- Mayor, governor, etc.
- City council, county board, state legislature, etc.
- Health department leadership
- Influential business, healthcare, and academic professionals in your community

Decisions:



Select and engage the stakeholder(s) who might be willing to champion a PFS effort



Bringing it home!

- Exhaust health and housing resources to create an aggregated set of data that helps you better understand lead poisoning in your area
- Make a visual tool with your aggregated data to identify any high-risk areas you want to focus your remediation efforts on
- Contact local officials and experts to receive data on the specific local costs of lead poisoning to Medicaid, special education, and the juvenile justice system (or use national averages)
- Use the formula provided to calculate the loss of lifetime earnings for your area
- Determine the costs of making a house lead safe in your area by using historical housing-stock remediation data
- Identify and educate your key stakeholders

Phase 4: How do you put it all together?

Phase 4 brings together the work from the planning process and begins to make the PFS project a reality. Equipped with the necessary information, a clear idea of the outcome, and champions for the cause, you are ready to build the team and contract and begin implementation. Similar to the other phases, activities can happen sequentially or concurrently and may require revisiting earlier actions and issues.

Build the right team

The “right” team means the combination of organizations that is best equipped to achieve the desired outcome(s) in a timely, efficient, and effective manner. While there is no “one size fits all” team structure that PFS agreements must follow, there are certain decisions or activities that the payor organization(s) can undertake to help build the right team.

Find the right external organization and determine its role in the project

Identify the PFS activities that the external organization will need to perform. Based on the experiences of states and cities that have done PFS projects, the role of the external organization involves a very heavy lift—one the organization may not expect or have experienced before. Just some of the many responsibilities of the external organization include fundraising (working capital), project management, data collection, troubleshooting, and reporting. Project management responsibilities may include, but are not limited to, routine reporting, performance measurement, oversight of service-provider organizations, investor solicitation, and recruiting.

Select a procurement vehicle. If the payor has already selected an issue area, it can issue a Request for Proposal to solicit bids and qualifications from potential external organizations. It is important to be clear about the outcome it wants achieved and about the highest price it is willing to pay for that outcome. The RFP can ask for organizations to come forward with a plan for achieving the outcome and payment terms for achievement of those outcomes.

To ensure that there is sufficient interest and a sufficient number of proposals submitted, the payor can issue a Request for Information before the procurement process. Oftentimes, payors use RFIs to help them select the issue area or to better understand potential outcomes and interventions in an issue area. However, RFIs are also useful for gauging interest among potential bidders and preparing for the RFP process.

Build the right team

Assuming that leaders in Greater Cleveland use an intervention focused on remediating lead-hazard housing units, the payor selects a suitable external organization that is charged with assembling a team that can identify the most high-risk houses, recruit property owners, conduct remediation or abatement, and provide the necessary data or access to data to measure the outcome.

Find the right external organization and determine its role in the project

Identify the PFS activities that the external organization will need to perform. The primary contractual relationship is with the external organization. The external organization is responsible for the following:

- Creating a detailed plan for recruiting property owners and occupants and for remediating housing units
- Hiring, as needed, licensed providers to carry out key activities in the event that the external organization cannot do it on its own; key activities may vary based on the chosen model (e.g., Approach 1 discussed earlier would not require the external organization to identify housing units that meet remediation criteria, whereas Approach 2 would require it)
- Managing the logistical and practical details that will allow for housing units to be remediated (e.g., recruiting property owners to have their units remediated, making temporary arrangements for displaced families)
- Providing project management (which may include overseeing the cash flow model, scheduling, reporting, implementing course corrections)
- Collecting data that will be used in measuring the outcome
- Interfacing with other participants and stakeholders to the PFS project

The next step is to rate responses based on pre-determined criteria for the project and select the external organization. Ultimately, the payor wants to partner with an external organization that will successfully deliver the outcome; so, it is important to evaluate bids based on the quality of the organization's plans for achieving the outcome, the overall quality and demonstrated abilities of the organization itself, and the price that the payor will pay the organization if it achieves the outcome.³⁷

Select external organization. When selecting the external organization or project coordinator to deliver the interventions and outcome, a few core capabilities to look for are:

- Ability to work closely with the payor throughout the PFS contract, as both sides learn how to execute on the contract effectively
- Ability to raise money from potential investors
- Ability to serve as an interlocutor between the payor organization(s), investors, and other potential participants
- Ability to identify and select the best service provider(s) to deliver the social services (in the event that the external organization cannot provide the services on its own)
- Ability to collect and analyze real-time data in order to monitor progress toward outcomes
- Ability to intervene with service providers when program data indicates that the intervention is not achieving outcomes (i.e., course correct), to provide technical assistance as needed, and to respond when unexpected events transpire
- Ability to report key metrics, such as program participation rates or number of houses or persons served, to other stakeholder groups involved

Support the external organization in engaging investors, if desired

The responsibility for raising working capital and engaging investors lies with the external organization, and it is not required of the payor to play any role in this or to help in this capacity. However, in practice and in some places, the payor has helped to broker introductions between the external organization and investors at an early stage in the PFS process.

Payors may wish to keep in mind the information potential investors might consider when deciding whether to support the external organization:

- Investors care about the intervention and its track record
- Investors often take a more narrow, cost-benefit approach to decision making; for example, investors may calculate the rate of success that needs to be achieved in order to recoup the original investment and then stack that percentage up against the intervention's perceived ability to achieve or exceed that rate

³⁷ Kohli, Jitinder, Douglas J. Besharov, and Kristina Costa, "Social Impact Bonds and Government Contracting." Center for American Progress, 2 May 2012. Web. 1 June 2015.

Select a procurement vehicle. To procure an organization that is capable of delivering on these responsibilities, the payor can issue a Request for Proposal to solicit proposals and qualifications from local or national service providers. Through this process, the payor can get an idea for the prices that external organizations charge for each band or category of housing unit. Another option is to identify potential external organizations through existing working relationships or through informal conversations with existing service providers.

Select external organization. It is important to conduct a thorough due diligence process on any candidate or selected external organization; and hold subcontractors to the same standards as the external organization. For illustrative purposes, the Greater Cleveland PFS model's service providers may be as follows:

Table 12

Role	Potential Candidate(s)
Identify housing units that meet the remediation criteria within the designated geographic area	<ul style="list-style-type: none"> • Academic institution with access to extensive data
Recruit property owners and occupants to participate	<ul style="list-style-type: none"> • Nonprofit organization that has expertise working with the communities affected by lead or with the families who often live in unsafe housing • Communications firm
Arrange for alternative housing for displaced tenants	<ul style="list-style-type: none"> • Nonprofit focused on low-income or affordable housing
Perform actual remediation	<ul style="list-style-type: none"> • Home contractors that are certified in lead remediation

Support the external organization in engaging investors, if desired

If the external organization cannot provide the working capital to carry out the intervention, which is often the case, and likely so in a home remediation-focused PFS project, it will need to raise that upfront capital. The payor may, but is not required to, work with the external organization to meet with potential investors or broker introductions.

In Greater Cleveland, a number of different groups could serve as investors, including local community banks, national banks and investment firms with a presence in the city, and local public and private foundations.

- Investors often have shorter time horizons for a return on their investment when compared to the expectations of government; good PFS contracts consider near and mid-term payback milestones for the investment
- Some investors may not expect much of a return on their investment because their motivation in a PFS is to use their resources to support causes with a positive social impact
- Investors want to see real-time data along the way that provides early indication of success or failure; often, investors (and payors) will have their own internal metrics and timelines to consider when participating in a PFS project

Select and hire evaluators to determine if outcomes have been achieved

Determine the type of evaluation that is needed to verify outcome achievement. How you evaluate an outcome and a PFS project depends entirely on the nature of the outcome and the intervention involved in the project. Some outcomes can be evaluated using existing administrative data. However, if parties to the PFS contract wish to have an independent third party assess the outcomes and payments, they may hire an evaluator to assess outcomes and facilitate the payment process.

The evaluation framework for a housing stock-focused PFS project is relatively straight-forward: establish the number of at-risk and lead-hazard homes and validate if one of those eligible homes is made lead safe as a result of remediation. Validating that a house is lead-safe may require consulting different sources, including local, state, and federal standards.

Where an evaluator may be needed is around the issue of eligibility. For a home to qualify toward the outcome, it needs to pose a real risk to poisoning a child; otherwise, the external organization could end up selecting “easy” homes that pose little or no risk to children. Ensuring that homes included in the PFS project actually pose a risk can be done in a few different ways: either the payor selects the eligible homes, or the external organization selects the homes, proves the home meets the risk factors, and demonstrates the level of work needed to trigger payment. In the latter case, an external audit or evaluation would be needed.

Develop an evaluation methodology. Regardless of the inherent complexity associated with evaluation, the participants in the PFS contract can contribute to the development of the evaluation methodology. As a result of doing so, parties involved will come to a shared understanding concerning what will be evaluated, how it will be evaluated, and how large the sample size will be.

Build the contract

The contract codifies the outcome, roles, responsibilities, obligations, and agreements of the entire PFS project. It specifies outcomes, protocols for how participants will work with one another, processes for adjudicating conflicts, how the intervention will be assessed, and how and when payments are made. More importantly, the contract provides transparency and safeguards for all parties involved, including the target population. Examples of



Select and hire evaluators to determine if outcomes have been achieved

Depending on the interests and opinions of the payor and external organization (and potential investors), an external evaluator may be included in Greater Cleveland's PFS project. Because the outcome is relatively easy to observe, verify, and measure, an external evaluator may not be necessary. An evaluator could be useful in a remediation-focused intervention for the following reasons:

- An evaluator provides an independent, disinterested perspective that could prove very helpful in arbitrating potential disagreements that may arise over the course of the project
- An evaluator could provide expertise on setting good outcomes, appropriate metrics and indicators, and payment schedules
- An evaluator may be able to add insight and lend expertise to identifying housing units that are the most high-risk and evaluating those units' impact on reducing lead poisoning
- An evaluator may be able to more effectively and more objectively assess how much progress is being made and whether the project is on course toward reaching the outcome

Potential organizations to fill this role in Greater Cleveland include, but are not limited to, local universities and private research organizations.

Build the contract

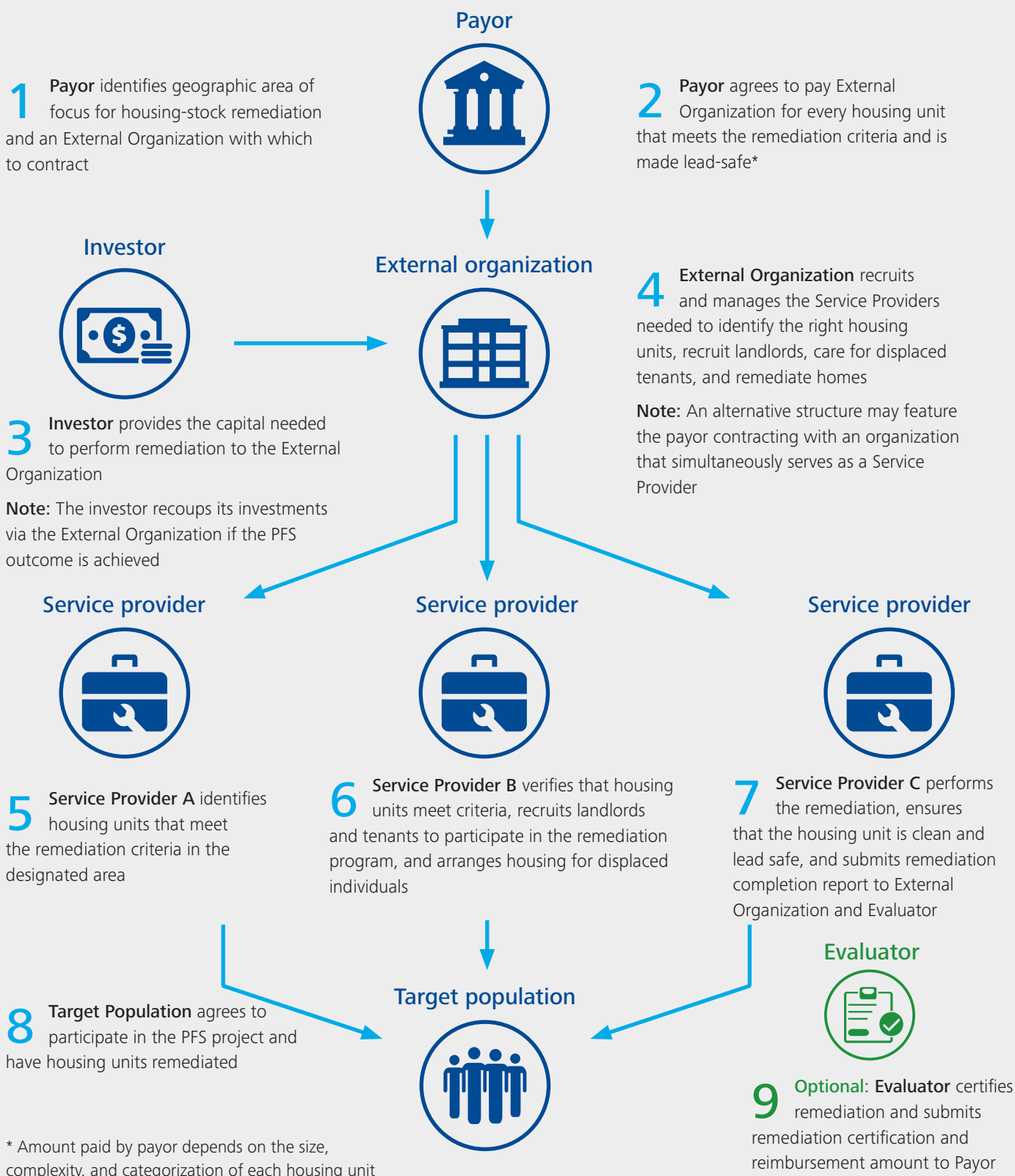
Once the team is selected, participants of the PFS project come together to build the contract.

It is at this phase that the participants finalize the outcome. To do so, participants determine the specific goals,

Potential PFS Operating Model

Housing-Stock Remediation & Lead Poisoning Prevention

The illustration below depicts a potential PFS operating model that focuses on housing-stock remediation. There are many variations on how an operating model might work (e.g., there might be one or two service providers instead of three), and below is one example.



real PFS contracts are included in Appendix C.

Based on the experience of practitioners who have successfully launched PFS projects, negotiating and building the contract is one of the most time-consuming, intensive, and challenging stages of putting together a PFS project. It requires a considerable amount of negotiation, deliberation, and legal consultation. The process of putting together the contract can range from weeks to months to over a year, depending on the level of complexity and number of relevant parties.

Develop payment

schedule. Each PFS project will have its own process of negotiating payment terms, based on the specific characteristics of the chosen outcome, PFS structure, and intervention. However, all parties should come to the table prepared and with a shared understanding of the outcome and the incentives for participants.

Complexity of PFS Contracts

Given some of the complexities associated with building a PFS contract (some of which are highlighted in this guide), the process of putting it together can take from weeks to months to even more than one year, depending on the social issue and parties involved.

The trigger of payments is tied to the achievement of the outcome. The schedule of payment has more flexibility but can be much more difficult to develop. At this stage, however, the payor will have already set an outcome and the price for that outcome; it will want to create a payment schedule that releases payment when the outcomes are achieved.

In the case of lead, the payor has a strong degree of confidence that the outcome is achieved once the house has been made lead-safe, so it could choose to make payment for each house that is remediated. The impact of achieving that outcome is the prevention of children from getting lead poisoned, which provides the value for the outcome.

Second, when parties develop the payment schedule, they can also consider the long-term cash-flow model and whether and how performance payments fit into that schedule. Often, the payors and investors will operate on different financial timelines and have different cash flow models, which may introduce tension in how the payment schedule should work. Mid-term payments could serve as a useful tool in those situations.

In some states, it has been necessary to pass legislation to give sufficient assurances to external organizations that payments will be released by appropriators. The issue arises when government is not permitted to make future funding commitments in the absence of appropriations covering future years. In Massachusetts, for example, the state legislature passed a law to create a trust for Social Innovation Financing. The legislature funded the trust using annual appropriations, and they based the level of funds on the payment schedule for a successful outcome. Annual appropriations are essentially held in escrow until the external

performance metrics, and quantitative and qualitative indicators that will be used to measure whether the outcome is achieved. For Greater Cleveland, this may include determining an ambitious but achievable goal of X number of houses to remediate within Y period of time.

The group negotiates payment terms based on the price of the outcome, cost of the intervention (home remediation and administrative and logistical costs), and other practical considerations. As part of the payment terms, the group determines the specific payment schedule, outlining at which points in time the payor will compensate the external organization for the housing units that have been remediated (e.g., payor compensates the external organization on a quarterly basis for the housing units that were remediated and approved by the evaluator during the previous quarter).

The payor and external organization should establish potential exit arrangements, in case early indicators show that the external organization is not on track or cannot achieve the outcome (i.e., if the number of houses remediated at a certain point is not on track). The payor may wish to have arrangements in place for the external organization to make a clean exit without substantial adjudication and transaction costs to all parties.

If the project is on track, parties may wish to have a plan for scaling ready so that the remediation need not be stopped before being expanded to a larger geographic area or to other locations.



organization achieves the outcome and triggers the payment from the trust.

Identify indicators of progress during the intervention and build in potential exit arrangements.

It may be helpful for parties to the PFS contract to identify early indicators of progress or short-term performance targets so that they have opportunities to learn, course correct, or intervene, if necessary.

PFS contracts may also define clear exit points and contingency plans in the event that short-term or intermediate outcomes are not being met, and the external organization has a strong incentive to walk away from its

efforts. For example, in a recidivism PFS project, there is a risk that recidivism rates remain unchanged halfway into the project, and the external organization knows that it is unlikely to get paid, so it will walk away. The payor and the external organization agree that this is the right decision because neither wants to continue with a program that does not work and will not pay. Thus, parties may wish to consider planning for a sensible wind down of services and a plan for handling an unfavorable interim analysis. Plans often include a clear definition for who is responsible for the decision to stop services and a formal statement of the termination.

Make contingency plans for emergency action. In most circumstances, the payor would give the external organization space and complete autonomy to achieve the outcome. However, there may be situations where the payor, particularly government payors, needs to take urgent action to prevent or stop harm to the target population. The payor can include a clause in the contract that allows it to intervene when it reasonably believes that the actions of the external organization are resulting in or likely to result in significant and immediate harm to the target population.

Pay for Success Legislation

In some cases where government serves as the payor, it may be necessary to pass legislation and set up PFS funds. These funds are flexible instruments that can provide levels of funding not available through individual, siloed budgets; and they give sufficient assurances to external organizations that payments will be released by government payors once the outcome is achieved. In Massachusetts, the state legislature passed a law to create a Social Innovation Financing trust. It funded the trust using annual appropriations and based the level of funds on the payment schedule. Annual appropriations are essentially held in escrow until the external organization achieves the outcome and triggers the payment from the trust. (For text of the legislation, see Appendix C.)

Establish protocol for reporting throughout the duration of the project. All participants will be interested in receiving data and information on the progress of the project. For some participants, such as the external organization and the evaluator (if there is one), this information will be critical to their roles. It is important to establish protocols early on for data/information collection and reporting and release of data to other stakeholders so that participants will have the minimum data necessary to evaluate the efficacy of the project. Establishing the protocols and capturing them in the contract may also help prevent any party from placing undue reporting burdens on others.

Draft plan for replicating and/or scaling the intervention. If a PFS project is proving to be successful a few years into a multi-year timeline, the payor may wish to replicate or scale the intervention. Parties to the contract may include in the contract whether, when, and how they will scale the intervention.

Monitor, support, and evaluate the PFS project

Once the contract is finalized and the project launches, the payor will pass on much of the day-to-day responsibilities, program management, and implementation to the external organization. The payor may not exercise control over the external organization's strategy and selection of subcontractors. However, this does not mean the payor will play a hands-off role once the contract is in place. Indeed, the payor will likely stay engaged and carry out three activities that are critical to the PFS project: monitoring, providing program support and data, and providing evaluation support.

The payor will continue to play a performance management role, monitoring the implementation of the project, watching the project's progress, and tracking relevant program and project data. It should also be prepared to troubleshoot problems as they arise and work collaboratively with other participants to address any unexpected challenges.

In this phase of the PFS project, the payor can also play an oversight role, making sure that the external organization and other participants are working within the bounds of the contract and meeting the stipulated requirements, particularly the ones that are included as safeguards for the target population.

Provide program support to the external organization. Some PFS projects will rely on government programs or agencies to provide data, referrals, or other ongoing support to the external organization in order for the project to function. For example, if the external organization were to provide services to a certain at-risk group that is identified through a government program, the

Monitor, support, and evaluate the PFS project

Provide program support to the external organization.

In a PFS project, there is a reasonable expectation that the payors and potential beneficiaries cooperate with the external organization to help achieve the outcome. For example, a home remediation-focused intervention may rely on the government and other organizations to provide information for identifying, selecting, and prioritizing specific lead-hazard housing units for remediation.

In Greater Cleveland, a local health department may receive reports of multiple children being lead poisoned in a certain location or housing unit. The health department could pass this information on to the external organization, which would then prioritize those units for remediation. This type of support and cooperation are expected throughout the course of the project.

In the years-long span of the project, the external organization and other participants will likely need and benefit from technical assistance and other support, such as support in monitoring and evaluating data. Parties to the PFS contract can think through likely challenges that they will encounter and identify potential approaches for addressing those challenges and groups that have the expertise to advise or consult on such issues.

relevant government agency would work hand-in-hand with the external organization to continue providing participants for the PFS project. If the project, for whatever reason, requires changes in the referrals, the external organization can work with the government agency to make those changes.

In a housing-focused lead intervention, the external organization may need to understand where the most heavily affected geographic areas are. To do so, it will need information on where child lead poisoning cases have been confirmed, which the external organization can obtain from the local public health departments. Once the project has launched, and the external organization is narrowing in on specific houses it will remediate, the public health agency or whichever agency has the best information for identifying lead-hazard homes can continue to make its data available and work with the external organization to identify and confirm that the houses are the appropriate ones to target.

Provide evaluation support, as needed. If the PFS project has an evaluator, the evaluator will probably lead and be responsible for monitoring the program milestones, providing actionable evaluation and feedback, and measuring the success of the program. The payor, however, may play a role in supporting those activities. For example, the payor may have collected data from its own monitoring activities that are pertinent to the project evaluation, or it may hold administrative data related to the target population (or a control group) that will be used to measure whether the outcome has been achieved. The payor can also work with the evaluator to answer questions, provide additional context around data procured by other parties, and/or obtain information to which the evaluator may not have access.

In cases where no external evaluator is used, the role of the payor becomes more important in the evaluation process. It may be charged with collecting and reporting outcome data throughout the course of the PFS project as well as ensuring the quality of the data; or it may be responsible for obtaining administrative data that the PFS participants will use to measure progress toward outcomes.

Appendix A: Lead Databases and Resources

Lead Poisoning Prevalence Resources	Housing Stock Resources
Centers for Disease Control and Prevention Childhood Blood Lead Surveillance , Number of Children Tested and Confirmed EBLs by State, Year, and BLL Group, Children, 72 Months Old	US Census Bureau, American Community Survey
CDC's National Health and Nutrition Examination Survey (NHANES)	State, county, or municipal housing agencies
State, county, or municipal public health departments	State, county, or municipal public health departments
State Medicaid systems	
Local hospital systems databases	
Local school district databases	
American Healthy Homes Survey (AHHS)	

Appendix B: Lead Poisoning Prevention Resources

Tools to Improve Screening Rates

- Centers for Disease Control and Prevention, “Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials” and accompanying terminology update:
<http://www.cdc.gov/nceh/lead/publications/screening.htm>
http://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm
- Centers for Disease Control and Prevention, “Recommendations for blood lead screening of Medicaid-eligible children aged 1–5 years; an updated approach to targeting a group at high risk”
<http://stacks.cdc.gov/view/cdc/5357>
- Rhode Island Department of Health, “Ways to Improve Screen Rates in Your Community”
<http://www.health.ri.gov/publications/factsheets/lead/WaysToImproveScreeningRatesInYourCommunity.pdf>

Renovation, Repair, and Painting Program Rules

- United States Environmental Protection Agency, “Lead Renovation, Repair and Painting Program Rules”
<http://www2.epa.gov/lead/lead-renovation-repair-and-painting-program-rules>
- United States Department of Housing and Urban Development, “Lead Safe Housing Rule”
http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/enforcement/lshr

Appendix C: Social Innovation Financing Trust Fund Act (MA) and Other Pay for Success Legislation

- Massachusetts Social Innovation Financing Trust Fund Act
<https://malegislature.gov/Content/Documents/Budget/FY2013/ConferenceReport-H4219.pdf>
- California Assembly Bill No. 1837
<http://payforsuccess.org/sites/default/files/20130ab183794chp.pdf>
- Connecticut Assembly Bill No. 501, Sec. 128, Special Session
<http://www.cga.ct.gov/2012/TOB/S/2012SB-00501-R00-SB.htm>
- New Jersey Social Impact Bond Act
http://www.njleg.state.nj.us/2014/Bills/A3000/2771_11.HTM
http://www.njleg.state.nj.us/2014/Bills/S0500/452_R1.HTM

Appendix D: Pay for Success Contracts

- Chicago Child-Parent Center Pay for Success Initiative
<http://payforsuccess.org/sites/default/files/o2014-8677.pdf>
- Massachusetts, Juvenile Justice
http://payforsuccess.org/sites/default/files/final_pay_for_success_contract_executed_1_7_2013.pdf
- Cuyahoga County Partnering for Family Success
<http://payforsuccess.org/sites/default/files/cuyahoga-county-pfs-contract.pdf>

