
Pay for Success Literature Review: A PreCare Report

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EXECUTIVE SUMMARY

This report provides an overview of Pay for Success, an innovative financing and contracting model for improving social outcomes, and suggests that it both aligns with and furthers the tenants of value-based healthcare. Whilst PFS has been under-utilized in the healthcare sector, the literature demonstrates that there are a number of reasons to use a PFS or PFS-inspired approach to assess the feasibility of innovative health services, including improving outcomes, leveraging innovative public private partnerships sharing of innovation risk, and accessing new sources of capital to invest in social programs, among others.

PFS is not the only innovative financing mechanism available within social impact, however it offers a distinct approach and set of tools for exploring innovations in health service delivery around the world. Whether the model is used in whole or in part is not important. Instead, leveraging existing knowledge to create new approaches to huge societal challenges like population health is essential. PFS-style demonstration projects can be the pilot testing mechanism for service delivery innovation in the healthcare sector.

An Innovative Financing and Contracting Model for Improving Social Impact

Defining Pay for Success (PFS)

Pay for Success (PFS) is both a contracting and financing mechanism, and it mixes a pay for performance contracting with private sector investment as working capital used to improve outcomes in social services that are priorities for municipal, regional or national governments. The pay for performance contract empowers governments to procure for social outcomes, not for social services. If agreed-upon outcomes are not achieved, there is no payment expected. Where PFS is differentiated from pay for performance is the financing. There is a triangulation of at least three partners – an investor, a service provider, and a government agency- whereby the investor provides the working capital to a service provider to deliver an evidence-based social program that is intended to achieve certain outcomes. Those outcomes, both social and financial, are valued by the governmental agency such that they are willing to pay for them if they are achieved. Efficient use of taxpayer money and cost savings are often touted government benefits since payors only pay for outcomes achieved, not services delivered. (Social Finance, 2018a; Third Sector, 2018; Urban Institute 2018).

PFS is the term most often used in the United States, but these contracts can also be known as Social Impact Bonds (SIB), Health Impact Bonds (HIB) or Development Impact Bonds (DIB). Interestingly, they are not structured as bonds at all (Warner, 2013) but instead constitute public-private partnerships with contracts for both outcomes and repayment of the investment capital.

With cuts in public spending and increases in acute social needs occurring in many jurisdictions, the public sector has had to rethink their methods of funding social programs. At the same time, there has been an increase in the number of investors interested in investing for both social and economic returns (Arena, 2016). Many practitioners view PFS as a helpful model to align stakeholder interests around social outcomes (ibid), whilst many academics are sceptical about aspects of PFS, including its limited application to social services, the challenge in showing causality, the favouring of large service providers, and the reality that cost savings may accrue across government agencies and create what the field calls the 'wrong pockets' problem (Fox and Albertson, 2011; Roman, 2015).

PUBLIC SECTOR

Launches PFS project in areas of political importance and also assumes the role of payor to the investor for agreed-upon outcomes if/when they are achieved by the service provider.

SERVICE PROVIDER

Receives working capital from the investor and implements an evidence-based social service intervention to achieve agreed-upon outcomes for the public sector.

INVESTOR

Provides the upfront working capital to the service provider, generally with an expectation of a financial return on the investment from the public sector agency if the agreed-upon outcomes are achieved.

PFS PARTNERS

PS

PUBLIC SECTOR

A public sector agency generally launches PFS projects in areas of political importance and also assumes the role of payor to the investor for outcomes if/when they are produced by the service provider. In rare cases, the payor is a stand-alone innovation fund established to pay for these kinds of efforts (e.g. Cabinet Office Social Outcomes Fund) instead of a municipal, regional or national government agency. Occasionally, investors, services providers or intermediaries originate projects. The public sector agency is motivated by access to funds for preventive programs, efficient use of taxpayer dollars through funding of evidence-based programs, improved outcomes for vulnerable populations, evaluation of service provider performance, and risk transfer to the investor. The government is dissuaded by its limited capacity for innovation in accounting, procurement, and data management, the fact that government contracts tend to favour lowest cost over performance, the reality that funding the populations that are deemed the most profitable by PFS cost-benefit analyses does not always overlap with the populations deemed by the government to have the greatest needs (Warner, 2013), the fact that the population sizes impacted by active projects overall have been small, and the potential pushback from citizens concerned about the privatization of social services as well as the use of taxpayer dollars to make outcomes payments to private investors.

PFS PARTNERS


SP

SERVICE PROVIDER


The service provider receives working capital from the investor and implements an evidence-based social service intervention to achieve agreed-upon outcomes for the public sector agency. Often service providers are non-profit social service organizations, but private companies and government agencies have also provided services in PFS projects. Some projects have multiple service providers engaged in the project, either because of scale or because the project requires multiple types of services. The service provider is motivated by the opportunity to deliver evidence-based social programs with improved outcomes, innovate service delivery, access new sources of investment to create more sustainable revenue streams through multi-year contracting, and evaluate the effectiveness of the intervention using the data to improve program design and implementation. The service provider is dissuaded by the tension that can occur between program fidelity and the implementation flexibility needed to produce outcomes, as well as the fact that accountability for outcomes creates greater risk for the organization than fee for service contracts.

PFS PARTNERS



INVESTOR

The investor provides up front working capital to the service provider, generally with an expectation of a financial return on the investment from the public sector agency if the agreed-upon outcomes are achieved. Some projects seek philanthropic (no expectation of a return) or concessionary (below market rates of return) investors, instead of investors looking for a market rate of return. The investor in a pay for success deal is generally motivated by the creation of social as well as finance returns on investment as well as the possibility to improve the efficiency of social services through the introduction of market-based approaches. The investor is dissuaded by the limited availability of both evidence-based social programs to bring to scale and the availability of investable projects with aligned risk/reward ratios.



PFS Motivation and Resistance

PUBLIC SECTOR MOTIVATION

- Access to funds for preventive programs
- Efficient use of taxpayer dollars through funding of evidence-based programs
- Access to innovative social services
- Improved outcomes for vulnerable populations
- Evaluation of service provider performance
- Transfer of innovation risk to (private) investors

SERVICE PROVIDER MOTIVATION

- Opportunity to deliver evidence-based services
- Opportunity to innovate services
- New source of investment/ more sustainable revenue stream
- Evaluation of effectiveness provides data to improve program design and implementation

INVESTOR MOTIVATION

- Social as well as finance returns on investment
- Improved efficiency through the introduction of market-based approaches in the government and social service sectors

PUBLIC SECTOR RESISTANCE

- Limited capacity for innovations in government accounting, procurement, and data management
- Government contracts tend to favour lowest cost providers
- Funding the populations that are deemed the most profitable by PFS cost/benefit analyses may not align with the populations deemed by the government to have the greatest needs
- Overall population sizes impacted by active projects have been small
- Pushback from citizens concerned about the privatization of social services as well as the use of taxpayer dollars to make outcomes payments to private investors

SERVICE PROVIDER RESISTANCE

- Tension between program fidelity and implementation flexibility needed to produce outcomes
- Accountability for outcomes has greater risk than fee for service

INVESTOR RESISTANCE

- Limited availability of evidence based social programs in which to invest bring to scale
- Limited availability of investable projects with appropriately aligned risk/reward ratios when seen through a capital markets lens

An Innovative Financing and Contracting Model for Improving Social Impact

Assessing Feasibility of PFS Projects

There are multiple methodologies that have been developed to assess the feasibility of PFS projects (see Arena, 2016; GHFI, 2016; Milner et al, 2016), but the essence of the approach contains four components:

- Committed partners, including a municipality, region or national government with a political priority to serve the target population, an investor willing to provide working capital for the ROI anticipated in the project, and a service provider with the capacity to serve the target population.
- Clearly defined population who have poor outcomes in the relevant social service area;
- Evidence-based social service intervention linked to desired outcomes improvements that can be effectively evaluated; and
- Financial models that monetize the costs and benefits of the intervention over the project timeline and demonstrates a risk-appropriate return on investment (ROI) (see also tools provided in Appendix E, Practitioner Resources).

See the discussion of feasibility in the healthcare sector on page 14 and the feasibility tools provided in Appendix E.

Once feasibility of the project has been confirmed, there are two additional partners that generally join the PFS project to support both transaction structuring and the project's implementation. The evaluator confirms the outcomes in line with the evaluation design (generally through a randomized control trial (RCT) or quasi-experimental designs). The intermediary facilitates payment and project management and may also provide performance management for the project.

Importantly, PFS is still in the field building stage, with the first contract issued in Peterborough, England in 2011 and the second in New York City in 2012. Both projects related to reducing prison recidivism. Both projects were ended without completing full project implementation, the first because of a policy change in Peterborough and the second because the anticipated outcomes were not produced by the intervention. Since those early days, 84 (as of May 2018) active projects have launched in continental Europe, the UK and the US. PFS covers areas including criminal justice, early childhood education, homelessness and workforce development. There is one project focused on environmental impacts.

Only ten percent of active PFS projects in these jurisdictions have been related to physical health (see case studies in Appendix A), though many projects have outcomes linked to social determinants of health. PFS has been under-utilized in the health sector, perhaps because of the complexity of contracting for outcomes payments from national health systems (e.g. US Medicaid).

To follow is a summary of the literature on how PFS has been applied in the health sector.

Summary of the Literature on Applying PFS to Healthcare

For this project, a systemic search of the academic and practice literature was conducted in order to describe the state of the art in PFS models that drive improved outcomes and impact in social services, with an emphasis on healthcare (see Appendixes B, C, and D). Paralleling the general PFS literature, practitioners articulate a rosier picture of the application of PFS to the health sector than academics, who express a number of concerns. There are four distinct findings from the literature detailed below.

Finding 1: PFS assumptions are consistent with those of value-based healthcare, which has become a central organizing concept in many western health care systems

Finding 2: Health-focused PFS projects could further the goals of value-based healthcare

Finding 3: There are also reasons why PFS may be challenging to apply to healthcare interventions

Finding 4: Whilst the feasibility of health-focused PFS opportunities should be assessed before a project is launched, the field should invest in developing an innovation pipeline for projects seeking to improve physical health outcomes

Finding 1: PFS assumptions are consistent with those of value-based healthcare, which has become a central organizing concept in many western healthcare systems

According to Gray (2017), "Value-based healthcare aims to increase the value that is derived from the resources available for a population." Sitting at the intersection of public health and medical/clinical care (GHHI, 2017a), it moves healthcare providers from fee-for-service to value-based payments and causes health providers to look upstream at prevention to decrease medical utilization in the future (Porter, 2009).

Evaluating the assumptions underlying value-based healthcare demonstrates a consistency with those underlying PFS. Both value-based healthcare and PFS:

- Focus on outcomes
- Leverage evidence-based interventions
- Link payment to performance against set measures
- Value prevention over treatment
- Require effective measurement and evaluation
- Seek evolution of a social service procurement and delivery systems
- Use public-private partnerships as a foundational structure

Summary of the Literature on Applying PFS to Healthcare

The primary difference between the two literatures is that the value-based healthcare literature focuses at the macro and meso levels, making it hard to understand what concretely this approach might look like in terms of project structuring or financial modelling for a specific project. PFS on the other hand, has significant detail about both the projects launched and under construction, and provides robust access to models, tools and methods currently in use by practitioners. Taken together, PFS projects could provide effective pilot programs to inform wider organization and systems change oriented toward value-based approaches within the healthcare sector.

The primary difference between the two practices is that value-based contracts generally have some percentage of payment for service, in addition to payments for outcomes, whilst the PFS model is focused explicitly on payment for outcomes (GHHI, 2017a). Importantly, value-based contracts in the healthcare sector have also often focused on paying incentives based on process, not outcomes (Golden, 2014). In fact, in 2016 Green and Health Homes (GHHI), a US-based intermediary and technical assistance provider focused on health projects in the PFS field, led a coalition to support contracting focused on outcomes and payment for results, not inputs or outputs (GHHI, 2017b). Additionally, they have explicitly called for states to classify pay for success model as a value-based payment model, since managed care organizations in the United States (US) often have mandates to work within these contexts and it could increase the use of PFS in healthcare (ibid).

Finding 2: Health-focused PFS projects can further the goals of value-based healthcare

Health has not been a primary issue area for PFS projects to date. Out of 84 projects across the US, UK and Europe, only nine (approximately ten percent) have physical health outcomes as part of their PFS contract, though many PFS projects have outcomes linked to the social determinants of health (e.g. early education). And yet, many health interventions have robust evidence-bases, especially when compared to other forms of social service intervention. The complexity of partnership and payment related to health could help to explain at least some of the aversion to health-based PFS projects to date (see Finding 3).

There are many ways that leveraging PFS in the health sector would provide benefits that furthers the goals of value-based healthcare. For example, health-focused PFS projects seek to create an alignment of stakeholder interests, including health systems and patients, through public-private partnerships (McNight and Olson, 2016). Public-private partnerships promote joint vision and responsibility, enhanced resource and knowledge base, improved data sharing and decision-making and the benefit of cross-sector learning in healthcare (Edmondson and Shumway, 2015). At the same time, they also avoid guarantees of long-term contracting, non-competes, guarantees of market share, which are some of the downsides that can occur in public-private partnerships (Warner, 2013).

Summary of the Literature on Applying PFS to Healthcare

Additionally, healthcare procurement can be channelled to evidence-based services and can require payment to be tied to outcomes, not just process or outputs, which calls for measurement and continuous improvement when performance is lacking (McNight and Olson, 2016). This is also likely to lead to better data collection, analysis and sharing (Shumway, 2018), as well as value creation from additional revenue from service enrolment, quality incentives and new services, reduced charges for services and reduced variable costs (McNight and Olson, 2016). Overall, health-based PFS projects could contribute to the evolution of evidence-based health policy and improved quality of evidence-based care (Olson and McNight, 2016c). At its heart, PFS can change the way governments procure for health services. According to Shumway, “PFS took root in non-profit finance, but its biggest benefit will come from helping governments revamp the way they spend public money on social programs” (2018).

New pools of private and philanthropic capital can also be leveraged to invest in prevention and population health services, speeding the rate of innovation in healthcare service delivery (Olson and McNight, 2016c), and moving risk to the private sector. This also means that new partners, including innovative organizations like technology companies that may not have directly served the health sector, could be included and rewarded (Sharfstein, 2017).

Finally, PFS offers excellent and abundant PFS practitioner methods, tools, models and technical partners to provide detailed guidance when structuring projects, including materials specific to healthcare. With the value-based healthcare field focused primarily on systems-level change, PFS provides an excellent pathway to test ideas at a micro level. This means PFS demonstration project can become the pilot testing mechanism for service delivery innovation “with the ability to change the standard of care for the entire population” (Olson and McNight, 2016c).

Finding 3: There are also reasons why PFS may be challenging to apply to healthcare interventions

PFS is not a panacea for the health sector, for any number of reasons. For example, PFS contracts still take significant investments of time and effort, with high transaction costs, because PFS project and payment structures have yet to standardize (Pauly and Lawson, 2017; Arena, 2016). There is also sparse empirical research demonstrating efficacy of the active PFS projects to date, including both their effectiveness and their efficiency (Lantz et al, 2016), though as noted earlier in this report, the application of PFS to healthcare is limited at this point in the field’s evolution. Additionally, a small percentage of the population creates a large portion of healthcare costs, making target populations who are able to create cost savings by accessing the relevant interventions a narrow target (Skopec, 2018, OECD, 2016). Whilst this is helpful in terms of identifying areas ripe for innovation, it also highlights that many health challenges would not be a good fit for this model. This reality reflects the broader debate in the field about whether PFS is a tool to use in broad application at scale or for a narrower application to innovative services.

Summary of the Literature on Applying PFS to Healthcare

There is also debate in the literature about whether PFS in population health in particular results in cost savings to governments (Katz et al, 2018), as improvements in health do not always reduce the cost of care (Skopec, 2018). From an overall cost-benefit analysis perspective, fragmentation in health systems across jurisdictions or stakeholders not only makes collaboration more challenging, it also makes payment collection and the realization of costs savings even complex than in some other social sectors (GHFI, 2016; McNight and Olson, 2016). There is also a significant debate in the literature about whether risk is truly transferred to the private sector (Arena et al, 2015), especially given that investors in many PFS contracts have required philanthropic guarantees to protect their interests and guarantee returns, raising questions about the risk investors are actually willing to take (OECD, 2016).

Finally, the focus within PFS on outcomes has created another debate, because it can lead to implementation of evidence-based interventions in ways that are inconsistent with the research. The balance between fidelity to proven intervention protocols and flexibility to implement in a way that achieves outcomes for the target population can create tensions in project (Meyer and Goddard, 2018). Some critics are also concerned about the potential for 'creaming' those deemed to be the easiest to serve from the population, whilst 'parking' more difficult clients or patients because of the complexity in moving them forward in terms of outcomes (Maier and Meyer, 2017).

Taken together, these realities underscore that application of PFS within the health sector is not without its challenges and that benefits from health oriented PFS projects may not be as straightforward as they appear. However, the evidence also points to the conclusion for the healthcare sector that using PFS as a means to catalyse innovation for specific populations. With new partners and sources of investment capital, as well as narrow targets within populations with high healthcare costs, PFS-like models may be just the tool needed to spur innovation in healthcare services.

Finding 4: Whilst the feasibility of health-focused PFS opportunities should be assessed before a project is launched, the field should invest in developing an innovation pipeline for projects seeking to improve physical health outcomes

As with any PFS project, assessing the feasibility of health-focused opportunities becomes an important first step before a project is launched. Many potential projects will end in feasibility, but that is true in every sector, not just health. Staying with the status quo assumes that it is a risk-free alternative, which is certainly not the case for those suffering from poor health outcomes. Those interested in moving the dial on social outcomes should help to encourage and develop a pipeline of project to innovate services that improve outcomes in physical health.

Summary of the Literature on Applying PFS to Healthcare

Application of existing feasibility tools (Arena, 2016; GHHI, 2016; Milner et al, 2016; Shumway, 2018; Social Finance, 2016b) to the health sector demonstrates that a project must have:

- A clearly identifiable target population in a specific geography that has complex health needs and currently either lacks services or is achieving poor outcomes from existing services;
- High financial and political costs to society and government if the health issue is not addressed;
- A municipality, region or national government partner who will champion the health intervention and provide access to the necessary jurisdictional cost and service data to ensure financial and service feasibility;
- A payor who can contract across budget siloes as needed to pay for health outcomes (versus inputs or outputs);
- An evidence-based health intervention that has strong likelihood to create outcomes for the target population and that can be effectively evaluated;
- A service provider that has the capacity to effectively deliver the health intervention to the target population;
- An investor who is interested in achieving the relevant health outcomes and is willing to provide capital for the return on investment (ROI) anticipated in the project; and
- A financial model that monetizes the costs and benefits of the health intervention over the project timeline and proposes a pathway to sustainability (see also tools provided in Appendix E, Practitioner Resources).

Feasibility allows for the opportunity to create innovative partnership in healthcare, including the breakdown of municipal, regional and national healthcare silos, to better serve the end use of health services. This cross-sector partnership model also allows for the collection and analysis of data to support innovation of services during feasibility. For example, in a GHHI feasibility study, the factor with the highest correlation to a solid return on investment was enrolment rate, and the partners' emphasis on referral and enrolment processes (GHHI, 2017c). Actuarial assessment was used in this case to determine the trigger events that would provide an effective ROI for the project, many of which related to preventing emergency visits and hospitalizations through increased preventive services.

Additionally, feasibility assessments in health care allow health service providers to assess the multiple roles they could play in these projects, including as payor, service provider or even as the investor (GHHI, 2017a), and PFS can be viewed as part of the "ongoing movement from volume to value". Even though many stakeholders finish the feasibility stage and do not move forward to structure the project for implementation, stakeholders are express gratitude for the learning and partnership connections that occurred (LPLC, 2017).

To follow is an assessment of the way PFS could impact the healthcare sector if it is used as a pathway to health innovation.

Impact of PFS on the Healthcare Sector

The PFS field is emergent and each launched project provides more guidance to those interested in public private partnerships at the intersection of business and society on how to create innovation and sustainability. Since no two projects have looked alike in terms of their partnership structure or financing terms, there is an opportunity to apply the lessons learned to healthcare and be inspired by the PFS approach to feasibility, contracting and delivery of service without being restricted by them. In short, PFS offers a flexible contract paradigm for value-based payment between public authorities and private suppliers. But the opposite is true too, in that the PFS field may also benefit from new lessons garnered from its application to the healthcare sector.

Recommendation 1: Build a Pipeline for Innovation, Not Scale

Both the need for significant cost savings and the sizeable transaction costs incurred to create PFS deals require project scale to be feasible, which can squeeze out innovation. Instead of pursuing PFS-type projects for the rollout of health services to large populations, a healthcare version could focus specifically on research and development (R&D), in particular in cases when there are behavioural changes needed within the physical health project (see next section). An approach that intentionally pursues an R&D strategy would also be consistent with the vision of a government that aspires to create greater health equality through the individualization of services, and is therefore driven by a government versus a financial logic, allowing for innovation and improvement of outcomes to be the primary goal.

Once deemed feasible, a project can explore existing and emergent models to find innovative financial models, terms, and approaches to inform the implementation of interventions, ideally avoiding some of the downsides to PFS in the process. For example, the use of PFS for innovation versus scale could be made more sustainable through the use of an evergreen-like fund that receives at least a portion of the outcome payments from any demonstration project. In this way, achievement of improved outcomes and lower health costs provides for reinvestment in new demonstration projects to further develop innovative services. There are examples of these funds in the PFS field (see, for example, Reinvestment Funds new \$10 million PFS fund), but they are still the exception and at present there are none specific to healthcare. This approach also increases the health services pie by leveraging working capital from investors seeking health innovation versus only redistributing existing government funding, and is likely to attract new sources of capital.

At the broadest level, PFS as a lever for innovation could also help change the focus within healthcare from treatment to prevention, from diagnoses to conditions, and from patients to citizens. Since it is currently more normal to be sick than being healthy (Lancet, 2015), it is not difficult to understand why the healthcare sector is both under pressure and fundamentally unsustainable. From a population health perspective, if PFS approaches can be a vehicle for developing preventive care business models using new sources of capital and externalizing the financial risks away from the public sector, then there is a strong business, as well as human, case for the use of PFS as an innovation tool. However, in order for it to work, there is a need for a comprehensive data system which is designed to measure outcomes

Impact of PFS on the Healthcare Sector

Recommendation 2: Use Data to Bridge the Knowing-Doing Gap

Using PFS as a financing vehicle, data systems can be improved and expanded to incorporate behavioural change data to demonstrate how to get populations to adhere to evidence-based practices that create the prevention outcomes sought (Brush, 2013; Milstein, et. al., 2011). The gap between what is known to be effective and what is actually done within a given population is one of the hardest bridges to bridge (Bero, et. al., 1998; Pfeffer and Sutton, 2000), and PFS demonstration projects are an excellent strategy for investing in innovating interventions and improved healthcare outcomes.

Specifically, the use of technology in the form of patient centered devices such as wearables and monitoring devices could be leveraged in a way that empowers patients to better participate in improvement of their own health outcomes. Calling on users to participate in monitoring their own progress toward outcomes, and empowering them to share information on their perceptions and behaviours so that this data can be considered alongside physical outcomes in the analysis of service effectiveness is an important aspect of this approach. It keeps the participant at the center of the service, moving the emphasis of the implementation from process (i.e. what the service provider does) to progress monitoring (i.e. what the patient or user does) in an effort to create better health.

Additionally, the tracking of this data serves several more purposes. From this data, healthcare professionals can create holistic profiles that will include health conditions, behaviours, perceptions and context and offer a comprehensive clinical picture, rather than only tracking physical health condition and symptoms. Holistic profiling may be more common in effective population health management, but there has not been a strong emphasis on the use of technology in any health related PFS projects in the US, UK or Europe.

Second, to both identify at risk populations for prevention and to track the comprehensive population data, the development of a data platform becomes imperative. The platform can provide also an ongoing source of information to support the development of new services through predictive analytics and progress monitoring means that data can be used across the health sector, and is not being developed in response to a single health project or population priority. As a result, a platform could provide a sustainable systems-level approach to leveraging data to drive ongoing health investments. This approach demonstrates the link between the macro health system and the micro health intervention that is currently missing in the value-based healthcare and PFS literature and practices, as discussed in the first section of this report.

Impact of PFS on the Healthcare Sector

Recommendation 3: Recruit Partners for Prevention

PFS projects are fundamentally public-private partnership that create cross sector collaboration to improve social outcomes. By fostering these partnerships, PFS creates opportunities for new actors to contribute to the health of a population. For example, even though PFS projects are predicated on robust existing data to inform the launch of services, there is not yet an example of a project that includes partners who provide diverse data sources as part of their service provision, including big data, business intelligence and health technology tools like wearable devices. This absence in the PFS field highlights an opportunity for the healthcare sector to seek new partners in innovation effort.

Prospective partners may be compelled by any number of factors, including an outcomes-based financial model, a commitment to evidence-based interventions or a focus on data-driven decision making. Each of those tenants of PFS highlight how new competencies may be applied within the healthcare sector. Additionally, investing in systems that identify high risk members of a population when they are just citizens and have yet to become patients may also be a compelling draw for less obvious new actors from outside of the formal healthcare sector, including sports organizations and educational institutions that have a stake in both prevention and research.

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APPENDIX A

Summary of PFS/Social Impact Bonds targeting physical or mental health-related outcomes & Case Studies for those with applicable lessons for new health focused project

UK

5 PFS Health Projects

- ▶ 2015: Newcastle Ways to Wellness- Chronic Illness (11,000) (Case Study 1)
- ▶ 2015: Worcestershire Reconnections – Social Isolation (1,500-3,000) (Case Study 2)
- ▶ 2016: Haringey, Staffordshire & Tower Hamlets – Mental Health- Employment Support (2,500)
- ▶ 2017: Bradford- Learning Disabilities/Autism (Avoidance of residential treatment) (14)
- ▶ 2017: London- AIDS (HIV Service Providers)

US

3 PFS Health Projects

- ▶ 2016: Nurse-Family Partnership – Child and Maternal Health (3,200)
- ▶ 2016: Kent County, MI- Child and Maternal Health (1,700)
- ▶ 2017: Santa Clara County Partners in Wellness – Mental Health (250)

EU

1 PFS Health Project

- ▶ 2017: Netherlands- Cancer Survivors (140)

CASE STUDY 1

UK Newcastle Ways to Wellness

In 2015, a SIB was launched in the UK called Ways to Wellness. Ways to Wellness is a program established as a non-profit organization in Newcastle, UK. The program services people in the 40-74 age range living in a specified part of Newcastle who have one of the ailments listed below and have been referred to the program by their General Practitioner:

- Chronic breathing difficulties (COPD) or Asthma
- Diabetes (Type 1 or Type 2)
- Heart Disease
- Epilepsy
- Thinning of the bones (osteoporosis)
- Any of the above with depression and/or anxiety

Those enrolled in the program are assigned a 'link worker' to support them in managing their disease and overcoming any barriers. The service focuses on 'social prescribing', which may include increased social activity, healthy eating, wellness activities or increased access of medical or social services as relevant. It is unique because of the deep integration of General Practitioners, the length of the project (7 years) and the number of patients that will be served (3,500 at any one time; more than 11,000 over the life of the project). The project specifically targets patients in less advantageous areas because of the research that demonstrates "the ability to cope with the complex issues raised by having a [long term condition] is directly linked to advantage (or, inversely, to disadvantage)."

This project will be considered successful if patients have both better outcomes and better outlooks, as well as decreased use of medicines and decreased numbers of visits to their General Practitioner and the hospital. GPs should see a reduction of their costs related to patients with the relevant long-term conditions, allow them to recognize cost savings or to reallocate resources to other patient needs. For the UK's National Health Service (NHS), the program is expected to reduce the cost of treatment for patients with the relevant long-term conditions upon the achievement of scaled services, as well as build their evidence-base for alternative treatments and offer a best practice to be replicated in other areas of the UK. The project anticipates a 22% reduction in healthcare costs for those enrolled in this intervention over a control group.

Investment is provided by Bridges Capital and outcomes will be paid by the UK's [Big Lottery Fund](#) [Commissioning Better Outcomes Fund](#) and the [Cabinet Office Social Outcomes Fund](#). Cost savings are estimated between 2-7 million pounds over the life of the project.

Websites:

<https://www.socialfinance.org.uk/projects/reconnections>

https://www.bigsocietycapital.com/sites/default/files/attachments/CBO_In-Depth%20Reviews_Reconnections.pdf

CASE STUDY 2

UK Worcestershire Reconnections

Reconnections is an intervention established in Worcestershire, UK that serves people over 50 age who are experiencing high levels of loneliness. Research shows that this kind of social isolation increases the risk of cognitive decline, dementia and depression and also has a higher correlation with mortality than obesity. As a result, those experiencing extreme loneliness have higher usage of health and social services in the UK.

Those enrolled in the program are assigned a caseworker or community volunteer to help them connect with people, activities and resources. Participants work with the program for 6 to 9 months, and their loneliness scale is tracked at the beginning, immediately after the completion of services and then again after 18 months. Client scores link directly to outcomes payments for the investors.

This is a unique deal because it is the only social impact bond to target reductions in loneliness and social isolation to date, and while it also targets improvements in physical health and wellbeing, it does not use cost savings from reductions in health services as a payable outcome (though these outcomes will be measured as part of the evaluation). This project will be considered successful if it creates more proven interventions to address loneliness in older adults, given that nearly 20 million UK citizens will be over the age of 65 by 2050.

The primary investors are Nesta, Big Society Capital and Macmillan Cancer Support, which collectively provided approximately 800,000 pounds. Another 50,000 pounds was provided by Age UK, a national association with links to the service provider, Age UK Herefordshire & Worcestershire, but operated as a separate entity. Cost savings are estimated to be more than 3 million pounds over 15 years, with maximum outcomes payments of just over 2 million pounds being out by a combination of the [Big Lottery Fund Commissioning Better Outcomes Fund](#), the [Cabinet Office Social Outcomes Fund](#), and the Worcestershire County Council between 2015-2019.

Websites:

<https://www.socialfinance.org.uk/projects/reconnections>

https://www.bigsocietycapital.com/sites/default/files/attachments/CBO_In-Depth%20Reviews_Reconnections.pdf

APPENDIX B

Summary of PFS/ Literature Review Methods

STEP 1 What is the selection criteria for identifying relevant literature?

1. Publication type
 - a. Academic articles
 - b. Practitioner articles
2. Timeframe
 - a. 2008-2018
3. Geography:
 - a. US
 - b. UK
 - c. Europe
4. Academic Review: databases for academic literature
 - a. ScienceDirect
 - b. SAGE Navigator/Journals
 - c. Emerald Insights
 - d. Business Source Complete
5. Academic Review: search terms for academic literature
 - a. Pay for Success
 - b. Social Impact Bond
 - c. Health Impact Bond
6. Practitioner Review: US CNCS/SIF Funded Intermediaries' Website/Publication Search
 - a. Corporation for Supportive Housing
 - b. Green and Healthy Homes
 - c. Harvard Kennedy School Government Performance Lab
 - d. Institute for Child Success
 - e. Sorenson Impact Center at the University of Utah
 - f. Social Finance
 - g. Third Sector
 - h. Local Initiative Support Corporation
 - i. National Council on Crime and Delinquency
 - j. Nonprofit Finance Fund
7. Practitioner Review: search by ACTIVE PFS projects (as of 4/2018)
 - a. US = 22 projects (3 health)
 - b. UK= 40 projects (5 health)
 - c. Europe= 22 projects (1 health)

STEP 2 Which pieces from the literature that meet the criteria are relevant to this project? SEE APPENDICES C and D

APPENDIX C

Literature Review: Academic Results

Author(s)	Publication Date	Title	Source/ Journal	Literature Type	Overview	Lit Review Relevance 0-3
Anyiam et al	2016	Cost-estimate and proposal for a development impact bond for canine rabies elimination by parenteral mass vaccination in Chad	Acta Tropica	Academic-Peer Reviewed	This article presents a cost estimate for eliminating rabies from Chad through the use of a 'development impact bond' (DIB), which is what SIB are called when applied in a development context. Quantitative methods are used to calculate the likely cost of the program and the ROI for investors who invest in a DIB. An operational plan is also included.	2
Arena et al	2015	SOCIAL IMPACT BONDS: NEW FINANCE OR NEW PROCUREMENT?	ACRN Oxford Journal of Finance & Risk Perspectives	Academic-Peer Reviewed	Download N/A: Over the last years, the Social Impact Bond (SIB) model has emerged as a new and innovative way for financing social programs. This work aims to assess the extent to which SIB model actually realizes its potential to overcome some of the shortcomings characterizing the public purchasing of social services. Therefore, the analysis has considered two aspects, which may affect the design and implementation of a Social Impact Bond: the specific needs of a policy maker in organizing the provision of social services and the social problem the services intend to tackle. After having (a) identified the motivations, which coexist in triggering the creation of a SIB and (b) several dimensions, which characterize the SIB design, the study, provides a review of the experiences in which the SIB model has been already applied, exploring the specific configuration used. Then, the study investigates the relationship between (c) how a SIB has been designed and the motivations that have triggered its development; (d) how a SIB has been designed and the social issue the SIB tries to solve. Lastly, considering the prevalent outline in a social sector, it will be discussed the ability of the SIB scheme to reform the social procurement practice. [ABSTRACT FROM AUTHOR]	3

Arena et al	2016	Social Impact Bonds: Blockbuster or Flash in a Pan?	International Journal of Public Administration	Academic-Peer Reviewed	This article studies why SIB, deemed promising, have only had marginal rates of application. The authors assess 22 SIBs launched to date and look for "configuration patterns and their deviation from a prototypical structure".	3
Baliga	2013	SHAPING THE SUCCESS OF SOCIAL IMPACT BONDS IN THE UNITED STATES: LESSONS LEARNED FROM THE PRIVATIZATION OF	Duke Law Journal		Download N/A: American government officials are starting to experiment with a novel government-funding and privatization structure known as a social impact bond ("SIB"). A SIB is a contract between a government agency and a private entity in which the government agrees to pay the private entity an agreed-upon sum only if it can meet certain goals or outcomes. Currently, SIBs exist both globally and domestically, and are targeted to solve perpetual social ills such as the high homelessness and recidivism rates plaguing certain communities. By analogizing the problems facing private prisons to the potential problems facing the use of SIBs, this Note details the privatization challenges that government officials will likely face as they implement SIBs. Most importantly, this Note is the first to propose how government officials implementing SIBs can overcome the traditional obstacles facing privatization schemes--both through the structure of SIBs and through additional contractual solutions. Finally, the Note concludes with a discussion about how elements of SIBs can be incorporated to improve existing privatization models such as private prisons, and how SIBs alter the existing debate about privatization in this country. [ABSTRACT FROM AUTHOR]	1
Belt et al	2017	U.S. PRISONS	Enterprise Development and Microfinance	Academic-Peer Reviewed	This article describes the DIB approach in detail, as well as takes a deep dive into the case of a DIB for coffee production in Peru. Lessons learned by each of the partners in the project are included.	2

Berndt and Wirth	2018	Market, metrics, morals: The Social Impact Bond as an emerging social policy instrument	Geoforum	Academic-Peer Reviewed	This article evaluates how the SIB emerged at the intersection of 'state', 'market' and 'philanthropy' and also assesses the role of each actor and in particular, the claim/appearance of a lack of state control in SIBs	1
Bero et al	1998	Closing the gap between research and practice	BMJ	Academic-Peer Reviewed	Citation for the knowing-doing gap discussion in this report	3
Child et al	2016	Paying for success: An appraisal of social impact bonds	Global Economics and Management Review	Academic-Peer Reviewed	Download N/A: A social impact bond is a type of pay-for-success initiative that shifts the financial risks associated with pursuing public purposes to private investors. Governments throughout the world are hopeful that they can be relied on as a politically feasible policy tool for tackling difficult social problems. Despite the excitement surrounding them, there is very little empirical scholarship on social impact bonds. This article takes stock of this new phenomenon, noting the many reasons for their widespread appeal while also raising some concerns that researchers and practitioners would do well to consider before adopting them. We do so by appraising them through the lens of three dimensions: accountability, measurement, and cost-effectiveness. Throughout, we draw comparisons to conventional government contracting. [ABSTRACT FROM AUTHORS]	2
Coble	2014	Health Impact Bonds: Removing the Legal Barriers	University of Pittsburgh Law Review	Academic-Peer Reviewed	This article discusses the application of SIBs to preventative health programs, and highlights the legal barriers in place in Pennsylvania that could be addressed in order to facilitate these kinds of contracts.	2
Cooper et al	2016	Social impact bonds: The securitization of the homeless	Acctg, Organizations and Society	Academic-Peer Reviewed	This article uses the St. Mungo/London Homelessness SIB as a case through which to explore the role of accounting in SIBs through a Foucauldian lens.	1

Cox	2012	FINANCING HOMELESSNESS PREVENTION PROGRAMS WITH SOCIAL IMPACT BONDS	Review of Banking & Financial Law	Academic-Peer Reviewed	This article provides an early overview of SIBs using the case of homelessness in Massachusetts, including the benefits and hurdles.	1
Dowling	2017	In the wake of austerity: social impact bonds and the financialisation of the welfare state in Britain	New Political Economy	Academic-Peer Reviewed	This article critiques the financialised welfare state in Great Britain for using tools like SIBs to transfer wealth from the state to private investors and more generally engage in welfare retrenchment.	1
Farr	2014	CO-PRODUCTION AND VALUE CO-CREATION IN OUTCOMES-BASED CONTRACTING IN PUBLIC SERVICES	Public Management Review	Academic-Peer Reviewed	This paper provides an overview of 'outcomes-based contracting' and offers a framework for co-production of value at strategic and design level, the service level and the outcome level that could prove useful in analyzing the application of this approach within health.	2
Fischer and Richter	2017	Opportunity	Evaluation and Program Planning	Academic-Peer Reviewed	Comparison of outcomes measured in a SIB versus using the SROI method. Describes that SIBs emphasize a narrower group of concrete outcomes that can be measured short term, while SROI measures a broader scope of outcomes over a longer term. Concludes that both can / should be used in assessing social services.	2
Fox	2011	New responses to vulnerable children in trouble: Improving youth justice; Early lessons from the Social Impact Bond at HMP	Probation Journal	Academic	This is a short summary of a government report that communicates lessons learned after the first year of the Peterborough SIB.	2
Fox and Albertson	2011	Payment by results and social impact bonds in the criminal justice sector: New challenges for the concept of evidence-based policy?	Criminology & Criminal Justice	Academic-Peer Reviewed	This article reviews the 'pay by results' approach, including SIBs, and their application within the criminal justice system in the UK.	2

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Fraser et al	2018	Narratives of Promise, Narratives of Caution: A Review of the Literature on Social Impact Bonds	Social Policy & Administration	Academic-Peer Reviewed	This article demonstrates three narratives in the existing SIB literature: public sector reform, private sector reform, and a cautionary tale. It also details the lack of empirical evidence and suggests that the cautionary tale is the most likely outcome for SIBs	3
Frith	2014	Social enterprises, health-care provision and ethical capital	Social Enterprise Journal	Academic-Peer Reviewed	This article addresses the role that social enterprise plays in the UK's National Health Service, and suggests a theoretical approach that uses ethical capital as a lens through which to debate this role.	0
Galloway	2014	Young People	Health Affairs	Academic-Peer Reviewed	The application of pay for success to nonmedical interventions designed to prevent illness and maintain/create health is worth pursuing. Several existing and potential projects in health are discussed.	3
GAO Report	2015	Pay for Success: Collaboration among Federal Agencies Would Be Helpful as Governments Explore New Financing Mechanisms	GOA Report to the Chairman, Committee on the Budget, U.S. Senate	Government	This US federal government issued report summarizes PFS as a mechanism (including benefits and risks), a few PFS deals in the US and UK, and the role of the US govt could play in the future of the field (as an outcomes payor, loan guarantor, capacity builder). It also suggests the US federal agencies need the ability to collaborate on these projects.	2
Global Burden of Disease Study 2013 Collaborators	2015	Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013	The Lancet	Academic-Peer Review	Citation for the need for partners in prevention discussion in this report	3
Gray	2017	Value based Healthcare	British Medical Journal	Academic-Peer Reviewed	This article discusses the need to move to a value-based healthcare model. The author explains that, "Value-based healthcare aims to increase the value that is derived from the resources available for a population."	3

Katz et al	2018	Social Impact Bonds as a Funding Method for Health and Social Programs: Potential Areas of Concern	AMJ Public Health Policy	Academic-Peer Reviewed	This article explores areas of concern in using SIBs for public health, including 'increased costs to governments, restricted program scope, fragmented policymaking, undermining of public-sector service provision, mischaracterization of the root causes of social problems, and entrenchment of systemically produced vulnerabilities". In essence, the authors argue that there may be reason to be critical of the use of SIBs in health care, and calls for additional study	3
Kim	2015	Performance-based development funding using market mechanisms: A public-private partnership social financing model for medical equipment technology in developing countries	Progress in Development Studies	Academic-Peer Reviewed	This article demonstrates how SIBs offer a beneficial alternative to traditional methods of funding medical equipment technology (MET) in developing countries.	2
Langley	2018	The folds of social finance: Making markets, remaking the social	Environment and Planning	Academic-Peer Reviewed	This article is a theoretical assessment of social finance and investment, and is not applicable to our project.	0
Lantz et al	2016	Pay for Success and Population Health: Early Results from Eleven Projects Reveal Challenges and Promise	Health Affairs	Academic-Peer Reviewed	A landscape analysis of the first eleven PFS deals in the US to assess the potential of using PFS to improve population health and health equity outcomes. Challenges include the lacking evidence base that shows both intervention effectiveness and economic efficiency, some misalignment with population health goals (including that many interventions aimed at social determinants do not actually save money and that the timeline needed for outcomes is quite long), and policy challenges for the US context, including the inability for Medicaid to be an outcomes payor for most social determinants interventions.	3

Lateri	2017	An Exploratory Study of Financial Social Innovations	Academy of Management Annual Meeting Proceedings	Academic-Peer Reviewed	Download N/A: The proliferation of new models of social innovation (SI) in fields as diverse as healthcare, education, and finance resulted in a broad range of applications and conceptualisations of SI, without a single clear definition. Recently, attempts at systematising SI scholarship have encountered some success. The article builds on this recent literature on SI and on the literature on financial innovation, and proposes a new framework for studying financial social innovations (FINSI's). It further studies seven successful FINSI's: microfinance, peer-to-peer lending, crowdfunding, mobile banking, impact investing, digital cryptocurrencies (particularly Bitcoin) and social impact bonds. The framework proposes the following dimensions to classify each FINSI: type of innovation; a process or an outcome; the level, dimension, and sector of impact; main drivers; and the financial functions it performs. Interestingly, the seven FINSIs represent every possible variation of each of the dimensions in the framework, and so validate the framework. Therefore, these FINSIs can be regarded as distinct manifestations of the underlying common phenomenon of SI. [ABSTRACT FROM AUTHOR]	1
Maier and Meyer	2017	Social Impact Bonds and the Perils of Aligned Interests	Administrative Sciences	Academic-Peer Reviewed	This article asks two critical questions inherent in aligning interests with SIBs. They include: "When SIBs turn out as 'win-win-win' options for governments, investors and non-profit SSPs, what does that mean for other actors, namely beneficiaries and taxpayers? Are they bound to 'win' too, or may there be negative effects of aligning the interests of key actors?"	2
Milstein, et. al.	2011	Why Behavioral and Environmental Interventions Are Needed to Improve Health at Lower Cost	Health Affairs	Academic-Peer Reviewed	Research that links behavioral change with physical wellness (referenced in Brush 2013)	3

Mohamad et al	2017	Social sukuk: A new mechanism to fund social services.	Journal of Emerging Economies & Islamic Research	Academic-Peer Reviewed	Download N/A: While the premise of Islamic finance embraces the principles of maqasid al-shariah and risk sharing with claims to social justice and welfare, the direct impact of the modern Islamic finance industry and its contribution to the social sector has been limited. This paper examines the claim among critics that there is an inherent weakness of the present-day Islamic banking and finance in terms of its underdeveloped social sector and argues for the need for new models that will enhance a proliferation of shariah compliant financial products for solutions in the social sector. The paper examines the emergence in Social finance of social bonds as new financing tools targeting on social needs and problems that otherwise would not be tackled. This paper discusses the benefits of structuring such a shariah compliant product and makes recommendations for structuring this new asset class referred to in this paper as social sukuk. [ATR ABSTRRT)	1
Myers and Goddard	2018	Virtuous Profits: Pay for Success arrangements and the future of recidivism reduction	Punishment & Society	Academic-Peer Reviewed	The authors look at the use of PFS in the criminal justice system, and suggest that it may have drawbacks including the emphasis on outcome versus means, prizing organizational flexibility over program fidelity, focusing on managers and financial experts over social service experts in implementation, the potential that cost savings may become a primary driver of policy development and inequities for marginalized groups whose circumstance does not provide the cost/benefit of other target populations. The authors encourage further empirical and ethnological study of PFS and SIBs to better inform the field in the future.	3
Neyland	2018	On the transformation of children at-risk into an investment proposition:	The Sociological Review	Academic-Peer Reviewed	This article argues that, through the application of a new literature, SIBs can be understood to be anti-market in the way they prevent competition and shield some stakeholders from risk.	2

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Pauly and Swanson	2017	Social Impact Bonds: New Product or New Package?	Journal of Law, Economics and Organizations	Academic-Peer Reviewed	This article analyses SIBs against an alternative method of financing and concludes that "(1) SIBs will emerge when other sources of capital have relatively high cost and (2) SIBs will emerge when investors in them have special skills that can be deployed to improve program effectiveness."	1
Pfeffer et al	2000	The knowing-doing gap: How smart companies turn knowledge into action	Harvard Business Press	Academic-Book	Citation for the knowing-doing gap discussion in this report	3
Porter	2009	A Strategy for Healthcare Reform- Toward a Value-based System	New England Journal of Medicine	Academic-Peer Reviewed	The author argues that both the insurance and the delivery systems need to change in US healthcare in order to a move from fee for service and volume to value. He also calls for robust measurement of outcomes.	3
Ryan and Young	2018	Social impact bonds: the next horizon of privatization.	Studies in Political Economy	Academic-Peer Reviewed	Download N/A: This paper shows how Social Impact Bonds (SIBs) serve to expand privatization in areas of social reproduction and care work. SIBs extend neoliberalism and austerity in the social care sector through the financialization of care work. They open these domains as a new frontier for investment markets, creating inequity for already marginalized groups. The paper concludes with an overview of the SIB landscape in Canada and explores its possibilities for growth. [ABSTRACT FROM AUTHOR]	1
Saltman	2016	The Promise and Realities of Pay for Success/Social Impact Bonds	EPAA/AAPE's Special Issue on Restructuring and Resisting Education Reforms in Chicago's Public Schools	Academic-Peer Reviewed	This article is critical of PFS and evaluates the Chicago PFS deal as evidence that financiers benefited more than the intended constituencies.	1

Schinckus	2015	Financial innovation as a potential force for a positive social change: The challenging future of social impact bonds	Research in International Business and Finance	Academic-Peer Reviewed	This article looks at the implications of SIBs in redefining finance.	1
Schinckus	2017	The valuation of social impact bonds: An introductory perspective	Research in International Business and Finance	Academic-Peer Reviewed	This article attempts to use traditional finance language to explain SIBs using the case of the UK Peterborough project.	1
Sharfstein	2017	Public Health Bundles	Milbank Quarterly	Academic-Editorial	Rewarding partners outside of the healthcare system for outcomes that improve health, and forming funds that bring together community coalitions around specific health challenges are both proposed in this op-ed. Called public health bundles by the author, they work best when population and outcomes are clear, and there is an evidence-based intervention that can create cost savings.	3
Stoesz	2014	Evidence-Based Policy: Reorganizing Social Services Through Accountable Care Organizations and Social Impact Bonds	Research on Social Work Practice	Academic-Editorial	Investments in evidence-based social programs and policies are being institutionalized through ACOs and SIBs. This article discussed the rising need for accountability related to outcomes and the impact that will have on the field of social work, where evidence-based approaches do not abound.	2
Thompson et al	2016	PHP373 Using Social Finance to Fund Generic Drug Repurposing for Rare Diseases: A Social Impact Bond Proof of Concept	Value in Health	Academic	This article describes a proof of concept undertaken by Findcure to leverage SIBs in repurposing generic medicines to treat rare diseases, a proposition not considered profitable by the pharmaceutical sector because of the size of the markets. They have built a financial model with UK NHS to allocate cost savings from successful new treatments to repay the SIB.	1

van Es et al	2016	SOCIAL IMPACT BONDS: AN INNOVATIVE WAY TO COMBAT YOUTH UNEMPLOYMENT	Journal of Positive Management	Academic-Peer Reviewed	Download N/A: To explore whether the so-called social impact bonds (innovative financing of social interventions) are a desirable and feasible alternative in combatting youth unemployment. Approach: Literature study and semi-structured interviews. Findings: Social impact bonds are an important addition to the existing employment measures. Limitations: Sole focus on the situation in the Netherlands; limited expertise. Value of the paper: The paper offers an understanding of a new instrument that leads to fundamental changes in the way social issues are tackled. In relation to positive management, social impact bonds call upon the corporate social responsibility of private parties to invest in social interventions. [ABSTRACT FROM AUTHOR]	1
Viviani and Maurel	2018	Performance of Impact Investing: A value creation approach	Research in International Business and Finance	Academic-Peer Reviewed	This article discusses the origins of impact investing and proposes a measure of value creation.	0
Warner	2013	Private finance for public goods: social impact bonds	Journal of Economic Policy Reform	Academic-Peer Reviewed	Using literature on contracting, performance management, and public private partnerships, this exploratory analysis focuses on institutional design, transaction costs, and performance measurement, outlining the opportunities and concerns SIBs present. This article does an effective job of comparing PPPs and SIBs	3
Wong et al	2016	Understanding Social Impact Bonds and Their Alternatives: An Experimental Investigation	Experiments in Organizational Economics (Research in Experimental Economics, Volume 19) WORKING PAPER VERSION ONLY (2013)	Academic-Peer Reviewed	The authors conduct an experiment and compare the performance of existing SIBs to input-based and performance-based contracts. Using a principal-agent multi-tasking framework, the article suggests that SIBs live up to the expectation of outperformance and there is a good chance they will be able to better fund the non-profit social services to which they are tied.	2

APPENDIX D

Literature Review: Practitioner Results

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Author(s)	Publication Date	Title	Source /Journal	Overview	Lit Review Relevance (Y/N)
Allin	2017	South Carolina Nurse Family Partnership Pay for Success Project	Harvard Government Performance Lab	This is a comprehensive case study about the SC Nurse Family Partnership project, including best and novel practices from their approach	3
Azemati et al	2013	Social Impact Bonds: Lessons Learned So Far	Community Development Investment Review	This report documents a number of early lessons in the SIB trajectory, including the difficulty in finding interventions that 'pay for themselves', difficulty in finding large enough sample sizes, and the need to build both provider and government capacity to engage with these projects.	2
Boss	2010	What's Next? Unlocking Future Savings	Stanford Social Innovation Review	This is more of a trade press article written around the time that the Peterborough SIB was launching that explains the process and logics of the approach	1
Brush	2013	Can Pay for Success Reduce Asthma Emergencies and Reset a Broken Health Care System?	Community Development Investment Review	The author describes three challenges in health care financing, namely that the system is set up to pay for treatment, not prevention, that fee for service has misaligned incentives that drive volume, not outcomes, and that the system is deeply fragmented across multiple payors. The author offers PFS as an alternate financing mechanism that provides sufficient up-front working capital, incentivizes longer periods for returns on investment, and encourages scaling of proven programs. It uses the example of Fresno, California and the health impact bond project there to improve asthma outcomes while also reducing health costs.	3
Cohen	2012	Big Society Capital Marks a Paradigm Shift	Stanford Social Innovation Review	This is more of a trade press article written to demonstrate how the capital markets can play a role in solving entrenched social issues. The author is a founding investor in Social Finance, which launched the Peterborough SIB, and this case is mentioned briefly	1

Dorn et al	2017	More Than Cost Savings	Urban Institute	The logic when PFS was launched included the assumption that projects would result in net savings for the government over the life of the project because the cost of a preventative intervention would be less than the remediation required to address it. However, this reality has proven difficult on many PFS projects. Now, advocates in the field recommend evaluation of both financial and nonfinancial benefits as comprising the full savings.	2
Edmondson and Shumway	2015	Collective Impact & PFS	Social Finance	This brochure compares PFS and collective impact using the case of Strive Together	3
Eldridge and TeKolste	2016	Results based Financing	Urban Institute	Globally, results-based financing may improve public service delivery and ensure investments are spent on the programs for which they are intended. This article encourages the use of tools like PFS and offers a number of examples of how RBF has been applied. It also highlights reasons to be cautious, including the lack of empirical evidence that RBF reduces costs.	2
Elkins and Zeira	2017	A Pay-for-Success Opportunity to Prove Outcomes with the Highest-Risk Young People	Communities & Banking	This article was written by two employees of ROCA, the service provider working on the PFS contract in Massachusetts serving incarcerated youth, describing the project from a service provider perspective. (This was written before any data on performance was available.)	1

Golden	2014	Pay-for-Success Financing: A New Vehicle for Improving Population Health?	Population Health	This article looks at the applicability of PFS to public health projects and determines that while not many have been undertaken to date, there are aligned interests in wanting to scale evidence-based interventions but needing to raise up front working capital. Additionally, this article notes that Pay for Performance is a payment structure in healthcare based on process metrics, while Pay for Success is a financing mechanism focused on outcomes metrics. (MOVED FROM ACADEMIC LITERATURE SEARCH)	3
Green and Healthy Homes	2018	PFS Resources	Green and Healthy Homes	http://www.greenandhealthyhomes.org/get-help/pay-success/pfs-resources	2
Green and Healthy Homes	2017a	Hospitals and Pay for Success	Green and Healthy Homes	Excellent summary of US hospital context and potential application of PFS (as payor, service provider or funder)	3
Green and Healthy Homes	2017b	PFS Lessons Learned	Green and Healthy Homes	Excellent overview of the lessons learned in the evolution of PFS	3
Green and Healthy Homes	2017c	Pay for Success Financing to Improve Asthma Outcomes	Green and Healthy Homes	This report is an excellent overview of feasibility assessment in the health sector, as GHHI reviewed two cohorts of jurisdictions that assessed feasibility of an asthma related PFS	3
Green and Healthy Homes	2016	Determining the Feasibility of PFS	Green and Healthy Homes	The report shares the detailed rubric used by Green and Healthy Homes when they assessment potential pay for success projects.	3
Harvard Government Performance Lab	2017	Social Impact Bonds 101	Harvard Government Performance Lab	This is an introduction document to social impact bonds and it provides an overview of all US projects launched by February 2017	2

Hatry et al	2017	Making Sound Cost Decisions in PFS	Urban Institute	This report covers the steps needed to accurately estimate costs on a PFS project, including cost of serving the population for a specific length of time, the likely savings/benefits resulting from the intervention, the amount of savings returned to investor and the costs of running the PFS project (project management, not program costs).	3
Hernandez et. al.	2012	Impact Investing in Sources of Health	California Endowment/ UC Berkeley/Coll ective Health	Overview of the health impact bond process, with some application to the asthma work done in Fresno, CA	2
Lee Pesky Learning Center	2017	LPLC Feasibility Report	Lee Pesky Learning Center	Feasibility written by a service provider about their PFS assessment process, including the valuable learning that it produces	2
Liebman	2016	Pay for Success in the US and the UK	Oxford Government Review	This article emphasizes the benefits to government for engaging in PFS, including a reorientation to preventive social services, the ability to engage in multiple year partnerships with service providers which allows continued iteration to improve results, especially by leveraging real time data and create a sense of urgency, and the opportunity to determine which services actually work.	2
Liebman	2013	Response to the U.S. Department of Treasury request for information, "Strategies to Accelerate the Testing and Adoption of Pay for Success Financing Models"	Harvard Government Performance Lab	This report makes recommendations on how the US Federal Govt can better support PFS projects in the US, including through an 'incentive fund' {later became the Social Innovation Fund, located the Corporation for National and Community Service}	2

Liebman	2011	Social Impact Bonds	Center for American Progress	An early summary on SIBs from the Center for American Progress. Much has changed in the field since then, so this report is of limited use except as an historical document	1
Liebman and Sellman	2013	Social Impact Bonds: A Guide for State and Local Governments	Harvard Government Performance Lab	This report provides an argument for the need for the SIB model and then offers some early guidance on determining whether government projects were worth pursuing.	2
Lyon-Eubanks et al	2018	Multnomah County	Multnomah County Public Health Division/Sorenson Impact Center	Feasibility study for a potential PFS project in Oregon (US) that looked at the relationship between housing stability and maternal and child health outcomes in the African American community of Multnomah County.	2
Macomber	2016	The Future of Cities Depends on Innovative Financing	HBR	This article states that PFS might be a helpful mechanism to use with urban/city-based development projects where benefits are diffuse	1
McKnight and Olson	2016	PFS Opportunities for Public Health Investment	Green and Healthy Homes	This is an excellent handbook on how to apply PFS to public health projects (in a US context).	3

Milner and Eldridge	2016	From Evidence to Outcomes	Urban Institute	This report focuses on what constitutes evidence in the context of a PFS project.	2
Milner et al	2016	Pay for Success Project Assessment Tool	Urban Institute	This report provides a detailed framework for assessing the feasibility of a PFS project.	3
Murray	2018	A New Form of Capitalism	Stanford Social Innovation Review	This article discusses the Peterborough SIB as a social financing innovation and the implications on future projects.	2
OECD	2016	Social Impact Bonds: State of Play and Lessons Learnt	OECD	Comprehensive, albeit dated, review of the state of the field globally, and the primary lessons learned through 2016	3

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Olson and McKnight	2017a	Contracting for Value based Purchasing	Green and Healthy Homes	This report provides guidance on options for governments and managed care organizations to begin value-based purchasing using shared-savings or shared-risk methods of paying for outcomes that enable Pay for Success financing and contracting. This will be excellent resources for this report.	3
Olson and McKnight	2017b	Outcomes based Payments Handbook	Green and Healthy Homes	This handbook offers a detailed framework for healthcare organizations to determine and make outcomes-based payments. This is specific to the US environment (Medicaid)	3
Olson and McKnight	2017c	Value based Purchasing Authority	Green and Healthy Homes	This is a US focused report that links new federal regulations regarding value-based purchasing with Medicaid to PFS opportunities. It is heavily situated in the US regulatory environment and may not be very helpful.	1
Olson and McKnight	2016a	Barriers to Pay for Success in Public Health	Green and Healthy Homes	This report on barriers specifically addresses US Medicaid challenges regard reimbursement under a PFS deal	2
Olson and McKnight	2016b	GHHI's Economic Modeling Handbook	Green and Healthy Homes	This report summarizes the economic models for 11 feasibility studies related to asthma projects across the US	3
Olson and McKnight	2016c	How to Pay for Success in Public Health	Green and Healthy Homes	This report highlights the way PFS could be implemented in a public health context, including as a govt led or facilitated (e.g. led by managed care organization), or through an accountable care contract. The models in this report are worth reviewing in detail to understand how they might apply in a Danish context.	3
Palandjian and Shumway	2015	Response to the Payoff for Pay for Success	Stanford Social Innovation Review	In this article, the authors respond to Rangan and Chase's article by pointing out three flawed assumptions about the future of PFS, including the govts only care about savings, that linking outcomes to service provider funding is problematic, and that investors want either performance or profits but not both.	2
Rangan and Chase	2015	Peterborough; Interim evaluation findings from the London Youth Reducing Re-offending Programme	Stanford Social Innovation Review	The article suggests that PFS is a worthwhile mechanism but will be limited in its impact because service providers must meet two essential criteria: 1. delivering and measuring their social impact; and 2. translating that impact into financial benefits or cost savings that can be linked directly to government budget(s). The authors predict a critical ongoing role for philanthropy in creating and launching PFS projects (an assessment with which at least 1 respondent disagrees).	2

Roman	2015	Solving the Wrong Pockets Problem	Urban Institute	The report covers the wrong pockets problem, whereby investments made in prevention in one area accrue benefits in other social service sectors (e.g. early education decreasing the number of people incarcerated.) This challenge is magnified by the structural barriers to pooling or transferring capital between agencies or even levels of government. PFS structuring can provide a central intermediary to help overcome some of these challenges.	2
Schaeffer et al	2015	After Pay for Success	Stanford Social Innovation Review	In this article, the authors argue that the logical follow on to a success PFS project is direct pay for performance contracting by the government, and they recommend an 'achievement compact' to try to tip the govt outcomes payor in that direction. They emphasize that one of the tenants of the field is to change the way govts procure for services.	2
Segal et al	2016	Amplify Impact: Building Nonprofit Capacity	Social Finance	This report focuses on the role that non-profits play in PFS and how project partners and other key stakeholders can help to build their capacity for this work.	2
Shumway	2018	Pay for Systems of Change	Stanford Social Innovation Review	The authors emphasize that the real innovation in PFS is changing the way govts procure for services, including the focus on outcomes, use of data, long term contracts, working across budget silos, and getting creative with both pricing and financing.	3
Skopec	2018	Pay for Success in Healthcare	Urban Institute	Excellent summary of the potential application of PFS in the US healthcare sector that will be helpful in informing this report.	3
Social Finance	2018a	How Pay for Success Works	Social Finance	Two-page overview on PFS and the key actions and players. More detail may be found at: http://socialfinance.org/how-pay-for-success-works/	2
Social Finance	2018b	Outcomes Rate card FAQ	Social Finance	This is a FAQ document to support the outcomes rate card fact sheet listed above. One salient point is that the rate card approach has the potential to speed up the PFS contracting timeline significantly. It also allows for contracting with more than one service provider for the same outcomes area(s).	3

Social Finance	2018c	Outcomes Rate card Overview	Social Finance	This fact sheet offers a helpful comparison between SIBs/PFS, performance based contracting and rate cards. Rate cards are an emergent evolution, used primarily in the UK, whereby the government established the social outcomes they want to achieve and the rate they are willing to pay for each. Service providers then contract for the work. Unlike in SIB/PFS, there is no evaluation conducted, but the outcomes are tracked and validated for payment. Several US jurisdictions are exploring rate cards	3
Social Finance	2018d	SC Nurse Family Partnerships Fact Sheet	Social Finance	Summary of FACTS from the South Carolina Nurse Family Partnerships PFS project	3
Social Finance	2018e	SC Nurse Family Partnerships Partner List	Social Finance	Summary of PARTNERS from the South Carolina Nurse Family Partnerships PFS project	3
Social Finance	2016a	SIBS the Early Years	Social Finance	This report summarizes the SIB field from its founding in 2010 through 2016, including a detailed summary of all launched projects through their publication date	2
Social Finance	2016b	Using PFS to Extend Diabetes Prevention	Social Finance	Case study and logic model on Social Finance's decision to scale a diabetes prevention PFS model	3
Social Finance	2014	Foundations for Social Impact Bonds	Social Finance	This report provides a comprehensive overview of SIBs and the role that philanthropy has had in growing this new market	2
Social Finance	2013	A Guide to SIB Development	Social Finance	This is a helpful (early) guide to building a SIB from field leader Social Finance. Steps include: Assessing the service area that needs reshaping; Defining the social issue; Defining the outcome metric(s); Defining the intervention(s); Assessing the value-for-money case; Programme design; Procurement; Contracting	2
Social Finance	2012	A Tool for Scaling Social Impact	Social Finance	This is a helpful (early) guide to building a SIB from field leader Social Finance.	2
Third Sector	2018	What is Pay for Success	Third Sector	Find more at: https://www.thirdsectorcap.org/what-is-pay-for-success/	2
Third Sector	2016	PFS Overview	Third Sector	This is a two-page outlining the PFS model	2

Third Sector	2015	Developing the Cuyahoga Family Success Program (PFS)	Third Sector	This is an excellent report detailing the Cuyahoga PFS project from the perspective of each of the project partners, and includes lessons learned. This is a terrific model to inspire this report approach.	3
Third Sector	2013a	Case Study: Preparing for a PFS Opportunity (ROCA)	Third Sector	This is a detailed case study written by PFS technical advisor Third Sector and service provider ROCA on how they assessed and responded to the RFP from the State of Massachusetts in the US for a PFS contract addressing prison recidivism.	2
Third Sector	2013b	Pay for Success in Santa Clara County	Third Sector	This is a detailed case study written by PFS technical advisor Third Sector and Santa Clara County about the PFS project launched there to address mental illness. Helpful lessons learned are included.	2
Urban Institute	2018	PFS: Get Started	Urban Institute	https://pfs.urban.org/get-started	2
Various	2018-2010	Database with more than 600 resources, including tools, templates, reports, case studies, etc., from all of the key players in the field.	Non-profit Finance Fund	www.payforsuccess.org : This is the most comprehensive compilation of PFS resources.	3
Various	-	Links to contracts, RFP, other documents related to PFS	Harvard Government Performance Lab	Links to contracts, RFP, other documents related to PFS	3
Yap	2017	Private finance for public goods: social impact bonds	International Financial Law Review	This is closer to a press article. It discusses a \$500 million USD social impact bond that has been launched by a French bank in yen in the form of a 'samurai' social impact bond.	2

APPENDIX E

PFS Practitioner Tools and Resources

Feasibility

GHHI, 2016. Determining Feasibility of Pay for Success Project: **Feasibility Rubric (particularly pp. 2, 5)**
<https://www.greenandhealthyhomes.org/publication/determining-feasibility-pay-success-projects/>

Hatry, 2017: Making Sound Cost Decisions in Pay for Success Projects: **Estimating Project and Outcomes Payment Costs**
https://www.urban.org/sites/default/files/publication/87961/cost_decisions.pdf

McKnight and Olson, 2016: PFS Opportunities for Public Health Investment: **Long Term Public Value (p. 10)**
<https://www.greenandhealthyhomes.org/wp-content/uploads/GHHI-Public-health-financing-opportunities.pdf>

Milner et al, 2016: Pay for Success **Project Assessment Tool**
https://www.urban.org/sites/default/files/publication/85391/pay-for-success-project-assessment-tool_1.pdf

Olson and McKnight, 2016. Economic Modeling Handbook: **Feasibility Assessment Methodology**
<https://www.greenandhealthyhomes.org/publication/gghis-economic-modeling-handbook-pay-success-feasibility-study/>

Transaction Structuring

GHHI, 2018: **PFS Term Sheet Template**
<https://www.greenandhealthyhomes.org/publication/download-gghis-pay-success-term-sheet-template/>

Nonprofit Finance Fund, 2017: **Service Provider Readiness Questionnaire**
<https://payforsuccess.org/sites/default/files/resource-files/service%20provider%20questionnaire.pdf>

Nonprofit Finance Fund, 2017: **Evaluator Readiness Questionnaire**
<https://payforsuccess.org/sites/default/files/resource-files/evaluator%20questionnaire.pdf>

Social Finance, 2018c: **Outcomes Rate Card Overview**
http://socialfinance.org/content/uploads/OutcomesRateCard_Overview.pdf

Urban Institute, 2017: **Evaluation Design**
<https://pfs.urban.org/library/ece-toolkit/content/pfs-ece-evaluation-design>

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PAY FOR SUCCESS
LITERATURE REVIEW:
A PRECARE REPORT

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