# Pay-for-Performance Partnerships

A Case Study in Funding for Supportive Housing

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# Table of Contents

# Executive Summary

Social Impact Bonds (SIBs) are a powerful new tool to jumpstart funding for innovative social programs. SIBs allow governments to support programming that has strong preventative aspects to it, paying only for long term performance, as opposed to short term delivery. Private investors provide the risk capital necessary to finance programming, enabling government to pay only for long term positive outcomes. In this way, SIBs are the ultimate pay-for-performance contract.

The SIB model is built on privately funding a service intervention in the short term that accrues savings to the public in the long term. If outcome targets are met, a portion of these public savings are returned to the private investors who provided the operating capital necessary to fund the initial intervention. SIBs finance immediate program delivery with the long term savings that accrue from program outcomes.

This pay-for-performance funding structure privatizes the risk of innovative program delivery and socializes its benefits.

SIBs have been demonstrated in the UK and the United States to target a variety of social issues ranging from recidivism to early childhood education to homelessness. While increasingly gaining traction as a tool to fund prevention globally, a SIB has yet to be launched in Canada. Feasibility studies across Canada have demonstrated the opportunity to launch a SIB, but none have yet been taken to market.

Last year, Ecotrust Canada responded to the Federal Government's *Call for Innovative Concepts in Social Finance* with a proposal to assess the feasibility of using a SIB to fund supportive housing. Supportive housing for marginalized individuals has clear long term impacts on health outcomes for participants, and reduces long term service loads on healthcare, policing, and the justice system. Specifically, we focused this study on housing for individuals with Severe Addiction and/or Mental Illness (SAMI). This decision was due to a convergence in the fall of 2013 of strong political interest in the SAMI population, new evidence on an effective intervention, and new economic impact data on the impact of co-occurring homelessness, mental health and addiction. Selecting the SAMI population as the target for a SIB was led by clear signs suggesting that the foundations for an effective SIB could be put in place relatively easily.

We looked at four key criteria to assess the feasibility of a *Housing First* focused SIB in Vancouver. We analyzed broadly the political will for such a SIB, its potential measurable impact, quantifiable economic benefit, and the capability of service providers to deliver supports according to a prescribed model.

Our findings suggest that the high level requirements for a Housing First focused SIB are in place, and our report outlines the specific ways a Housing First SIB could be deployed in BC. This report highlights the ways in which the support continuum for individuals on the SAMI spectrum lacks cohesion and is not organized to maximize the health outcomes of clients. A SIB provides the opportunity to model an optimized system that aligns the interests of funders, government, health authorities, policing, and supportive housing providers towards maximizing long term health outcomes for the SAMI population.

The SIB that we outline in this report would enable government to de-risk an investment into new service delivery, performance management, and outcomes measurement tools that could ultimately shape how existing service delivery systems function. The SIB would be a contained lab where adaptations to existing models could be tested and proven while new data on how to best serve the SAMI population could be collected and analyzed.

This is an opportunity to:

- Expand the scale and quality of supports provided to the SAMI population
- Increase the collective knowledge around how to best serve these individuals
- Model real changes to the existing, poorly optimized service landscape
- Save the public money over the long term

Our hope is that this report can catalyze a collective effort to deploy this innovative social financing tool, capitalizing on the opportunity for real and sustained positive social impact.

# 1 Introduction

## 1.1 CONTEXT

Social Impact Bonds are a powerful tool to jumpstart funding for innovative social programs.

The social sector is in transition. Policy makers and funders are increasingly seeking evidence to prove that their dollars are being used as effectively as possible. Agencies are being held accountable to demonstrate the short term outcomes and long term impact of the programs and services they provide. Traditional streams of government and foundation funding are being restructured and tightened to meet the demands of balanced budgets and better defined outcome targets.

Social Impact Bonds (SIBs) align the interests of funders, government, and service providers, expanding the opportunities to direct new financing to programs with well evidenced outcomes. This pay-for-performance funding structure privatizes the risk of innovative program delivery and socializes its benefits.

## 1.2 PROJECT GENESIS

Following the Federal Government's *Call for Innovative Concepts in Social Finance*, Ecotrust Canada responded with a proposal to explore applying Social Impact Bonds to housing projects in BC. Ecotrust Canada has a wide breadth of experience in mission-focused investment, and decided to leverage this experience to explore SIBs as an emergent form of social finance. For 10 years, Ecotrust Canada operated the Coastal Loan Fund, providing $10 million in socially and environmentally focused loans to small scale entrepreneurs who maintained triple-bottom line objectives within their enterprises. Numerous early stage investments in triple-bottom line initiatives have made Ecotrust Canada a leader in directing capital resources towards innovative solutions to environmental and social challenges.

Ecotrust Canada's day-to-day work with First Nations communities up and down the coast of British Columbia fueled interest in using a Social Impact Bond to fund the creation of housing in these communities. In the past, Ecotrust has collaborated on innovative projects to design and develop culturally appropriate housing for First Nations. SIBs hold the promise of being an innovative funding model to attract resources to the provision of higher quality, culturally appropriate housing. Unfortunately, a high level analysis of the various factors required to establish the feasibility of a First Nations housing SIB quickly showed that undertaking such a task would not be straightforward. Given the complexity of the SIB funding vehicle, the decision was made to switch tack and select an issue for which more interests were aligned.

Given the current attention being paid to housing for those with mental illness here in Vancouver, our attention shifted to exploring a SIB for housing and support services. With funding from the Real Estate Foundation of BC, Central City Foundation, and Simon Fraser University, Ecotrust Canada and the Beedie School of Business undertook a feasibility study to determine the appropriateness of using a SIB to fund innovative supportive housing models.

## 1.3 DEFINING THE PROBLEM

Government is mandated to provide certain public goods in the form of health care, social support services, supportive housing, and various other programs to meet the wellbeing needs of the citizens in its care. While new research is continually demonstrating better and more efficacious ways of delivering services and supports, it is not always straightforward for governments to adapt existing programs to the best practices emerging from academic research and other privately funded initiatives. Disrupting existing funding for well established programming can be politically disastrous, and funding new initiatives can be equally so if a program fails early in its life.

Social finance and SIBs in particular, can be a way for governments and the private sector to partner on social outcomes and share the risk in funding innovative programs.

## 1.4 INTRODUCTION TO SOCIAL FINANCE

Social finance is financing that contains blended calculations of investment return, integrating social and/or environmental dividends in addition to basic financial returns. These adapted financing tools can be used to complement traditional sources of funding in scaling proven approaches to solving various social and environmental challenges.[1] Financial return expectations in social finance mechanisms are frequently reduced in order to facilitate an integrated social/environmental mission.

While there will always be a place for philanthropic funding, social finance can be a bridge between academic research and stable government funding. In the case of businesses that have a social mission, social finance can be a bridge between philanthropic grants and earned revenue streams. Social financing can be particular helpful for non-profits that are engaging in business activities that are related to their mission. Below-market rates for debt and equity can provide social purpose organizations additional flexibility in meeting their missions.

1. Human Resources and Skills Development Canada Government of Canada, "Report: Harnessing the Power of Social Finance | ESDC," May 2, 2013, http://www.hrsdc.gc.ca/eng/consultations/social_finance/report/index.shtml.

# 2 What are Social Impact Bonds?

Social Impact Bonds are a social finance mechanism designed to fund preventative social programs with private capital over the short term and accrue savings to the public system over the long term.

The SIB model is built on privately funding a service intervention in the short term that accrues savings to the public in the long term. If outcome targets are met, a portion of these public savings are returned to the private investors who provided the operating capital necessary to fund the initial intervention. In this way, Social Impact Bonds finance immediate program delivery with the long term savings that accrue from program outcomes.

There are five key players in a Social Impact Bond:

**A Commissioning Government:** Government guarantees repayment of investor principle and return contingent on programmatic outcomes being achieved over the lifetime of the SIB.

**Private Investors:** Private investors provide up front and ongoing capital to the intermediary responsible for coordinating the provision of support interventions.

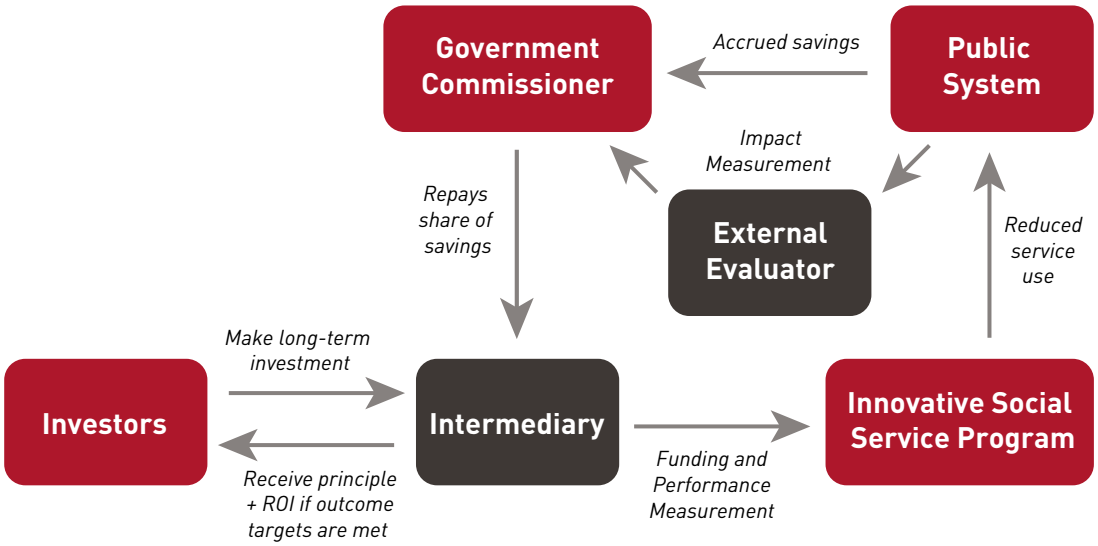
**SIB Performance Management Intermediary:** An intermediary acts as the body accountable for the achievement of the social outcome. The intermediary manages investor funds, and providers leadership and performance management to the various contracted social services.

**Service Providers:** Service providers are contracted by the intermediary to deliver a specified service intervention according to an evidenced based model selected prior to the commissioning of the SIB. Providers are ideally contracted into specific roles, providing the intermediary organization flexibility in achieving the desired outcome over the lifetime of the SIB.

**Third Party Evaluator:** A third party evaluator provides measurement and verification services to determine whether outcome payments from the commissioner are to be made. This evaluator collects data and performs pre-determined statistical analysis to determine the effects of treatment on the target population.

The relationship between all parties in a SIB model is illustrated by the following:

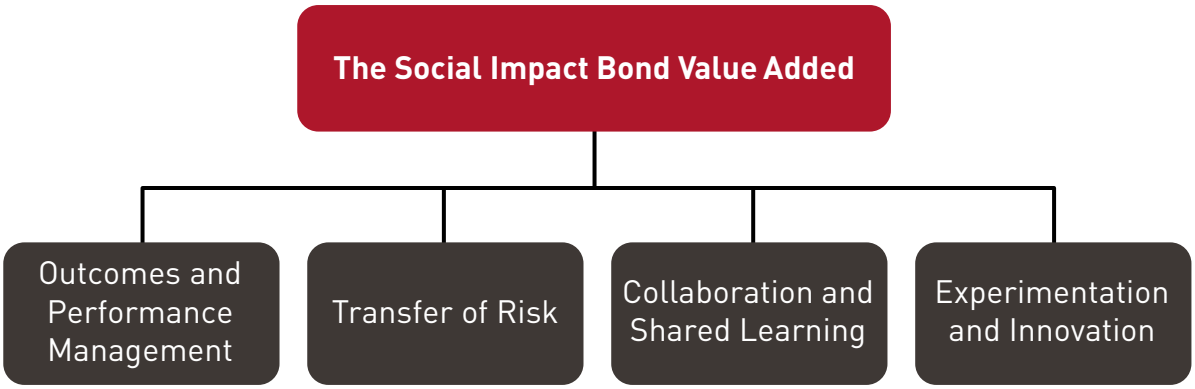
Figure A



# 3 The Advantages of Social Impact Bond Funding

The Public Private Partnership is a well-established funding mechanism that enables governments to transfer public infrastructure project risk to the private sector and only pay for positive performance outcomes. Social Impact Bonds are a P3 analog for the social sector, enabling governments to transfer short term program risk to the private sector, and only pay for long term positive outcomes. While there is a premium associated with SIB funding that is in excess of a government's cost of debt, as in the P3 model, this premium covers the private sector risk that is borne through the model. For the right type of project, this form of financing can be the most appropriate way to balance government's need to simultaneously innovate while managing risk.

Figure B




## 3.1 SPURRING COLLABORATION, COMMUNICATION AND SHARED LEARNING

Traditional funding mechanisms, be they grants, governmental contracts, or private donations, do not typically facilitate inter-agency collaboration.

Programs in the social sector are often delivered in siloes, restricting collaboration towards shared outcomes and stifling communication between agencies who might be serving the same individuals in different ways. With information on individual clients fragmented across multiple agencies, there is little coordination to ensuring that the highest health and well-being outcomes are being achieved.

Social Impact Bond contracts are fulfilled solely on the outcomes achieved through the provision of services. Privately funded over the short term, SIB projects are actively managed by investors who can design and contract services across a variety of providers to achieve a common goal.

The active involvement of project investors and the centralization of key management activities ensures that all contracted service providers are aligned in achieving a shared outcome. Centralizing data collection, operations management, and ongoing performance measurement enables the intermediary to share ongoing results with all participating organizations and collaboratively overcome emergent barriers to achieving the intended outcome.

## 3.2 TRANSFERRING RISK IN PUBLICALLY FUNDED PROGRAMS

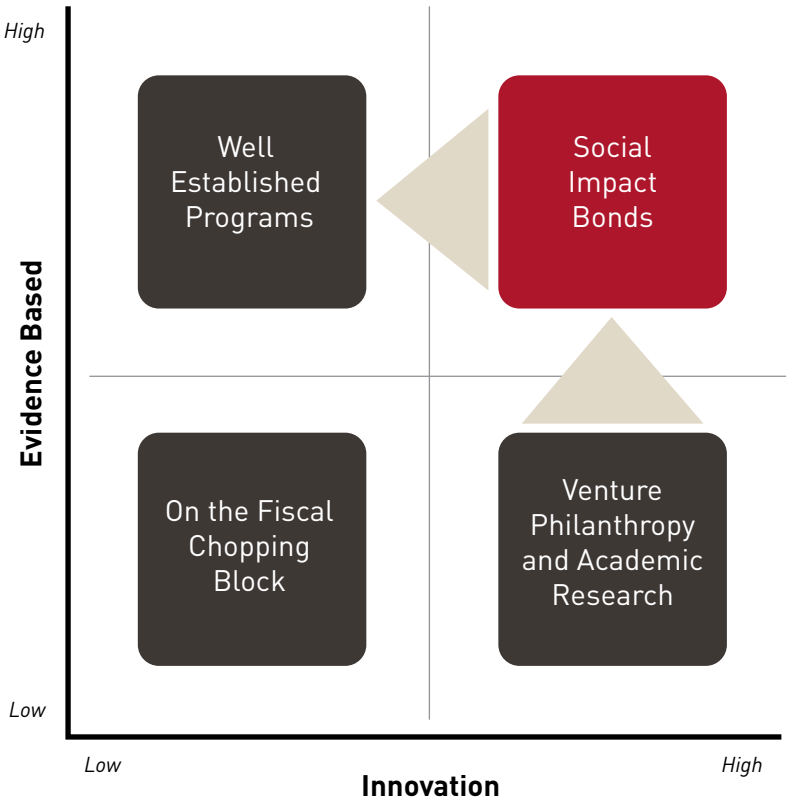
There are numerous valid reasons why governments do not risk operating budgets on leading edge social service programs. While innovative programs may have a growing academic evidence base supporting their outcomes, programs without well-established histories of provision can be difficult to implement if doing so means cutting back on other longer running services. Similarly, if governments fund an innovative program and it fails, the public fallout can be politically disastrous.

Social Impact Bonds allow governments to support innovative programming, expanding the range of supported services without bearing the large share of risk associated with their provision. Private investors provide the risk capital necessary to finance programming, enabling government to pay only for positive outcomes. In this way SIBs are the ultimate pay-for-performance contract.

## 3.3 OPPORTUNITIES TO EXPERIMENT AND INNOVATE

Social Impact Bonds are tools that enable governments to experiment with new forms of preventative programming and explore the boundaries between proven interventions. Similarly, SIBs enable governments to move an intervention beyond the realm of academic random control trials, and into wider deployment. SIBs are an ideal model to ease the transition of innovative programs into sustained governmental funding.

Figure C


High
Low
Evidence Based
Well Established Programs
Social Impact Bonds
On the Fiscal Chopping Block
Venture Philanthropy and Academic Research
Low
High
Innovation

# 4 Prominent Social Impact Bond Examples

Social Impact Bonds have been most widely demonstrated in the United Kingdom where they have been deployed to fund preventative programs related to recidivism, homelessness, unemployment, and care for vulnerable children. With pilot support from the US Government Department of Labor, SIBs are now being deployed in the United States as well.[2] The following are three examples of SIB projects being actively funded through private investment.

| HMP Peterborough | |
|---|---|
| Length | 6 Years |
| Value | £5 Million |
| Size | 3000 participants |
| Target Population | Short Sentenced Criminals |
| Study Methodology | Propensity Score Matching |
| Description | This is the first SIB ever launched, and is being piloted in the UK through Social Finance UK. It is focused on reducing re-offending amongst short sentenced male prisoners in the HMP Peterborough prison. The Ministry of Justice commissioned the SIB and Social Finance UK, acting as intermediary, contracted four social service providers to deliver resettlement services for individuals leaving prison. The four agencies in the SIB - St. Giles Trust, The Ormiston Children and Families Trust, SOVA and the YMCA- all have a strong track record of providing upstream service interventions.<br><br>The SIB will run for six years and will serve 3000 people. If the SIB reduces reoffending rates by 7.5% or more, investors will receive a share of the public savings as a return to a maximum of 13% annually.<br><br>More information is available from the Social Finance UK Website.[3] |

2. "Grant Awards, Employment & Training Administration (ETA) - U.S. Department of Labor." Accessed February 18, 2014. http://www.doleta.gov/workforce_innovation/success.cfm.

3. "Criminal Justice | Social Finance," accessed January 16, 2014, http://www.socialfinance.org.uk/work/sibs/criminaljustice.

| Homelessness in the Greater London Area | |
|---|---|
| Length | 3 Years |
| Value | £5 Million |
| Size | 800 participants |
| Target Population | Rough Sleeping Individuals in London |
| Study Methodology | Historical Baseline |
| Description | The Greater London Authority commissioned this SIB to combat street homelessness within a cohort of 800 vulnerable individuals. The GLA commissioned two service providers - St Mungo's and Thames Reach - to provide wrap around supports for the cohort over three years. Outcomes for the SIB are focused on reducing rough sleeping through stabilizing the accommodation of clients, reconnecting individuals to family or country of origin supports, helping them find employment, and better managing their health challenges.<br><br>This SIB is valued at £5 million and a return of 6% is contingent on outcome targets being met over its three years of operation.<br><br>More information is available from the Greater London Authority Website.[4] |

4. "Social Impact Bond for Rough Sleepers," accessed January 16, 2014, http://www.london.gov.uk/priorities/housing-land/tackling-homelessness-overcrowding/homelessness-rough-sleeping/social-impact-bond-for-rough-sleepers.

| Re-Entry Employment Services for Formerly Incarcerated Individuals in New York City and Rochester N.Y. | |
|---|---|
| Length | 5.5 Years |
| Value | $13.5 Million |
| Size | 2000 Individuals |
| Target Population | Formerly Incarcerate Individuals |
| Study Methodology | Random Control Trial |
| Description | This SIB provides $13.5 million over 5.5 years to fund an expansion of employment service programming for formerly incarcerated individuals in New York City and Rochester N.Y. The Center for Employment Opportunities has been commissioned to provide services to 2000 individuals over a 4 year time span.<br><br>The funding will expand workforce reentry services for formerly incarcerated individuals and aim to reduce the recidivism rate within this population.<br><br>This SIB is the first to use a Randomized Control Trial to measure the effects of treatment and determine whether or not outcome payments will be made.<br><br>More information is available from the Social Finance Inc. website.[5] |

5. "Social Finance Drives Landmark New York State Deal | Social Finance," accessed January 16, 2014, http://www.socialfinanceus.org/what-we-do/select-current-engagements/social-finance-drives-landmark-new-york-state-deal.

# 5 Identifying a Hotspot for SIB Funding in BC: Supportive Housing for Individuals with Severe Addiction and/or Mental Illness

In BC, there are a number of opportunities to use a SIB to fund prevention . Specific interventions within health care, the foster care system, criminal justice, and early childhood education could all be candidates for BC's first SIB. While an intervention that fits with the basic long-term savings model of a SIB is a necessary component, given the complexity of SIB funding, the right issue needs to be selected based on a broader criteria. Social Finance UK recommends selecting a target area for a SIB based on a framework that establishes whether there is adequate political will, long-term economic savings, measurable impact, and strong service provider capability.[6] If these criteria are met, then deploying a SIB should in theory be feasible, barring any obstructions in the process of launching the investment vehicle.

## 5.1 SUPPORTIVE HOUSING FOR INDIVIDUALS WITH SEVERE ADDICTION AND/OR MENTAL ILLNESS

As will be identified in greater detail in the feasibility assessment provided in Section 7, we focused this study on housing for individuals with Severe Addiction and/or Mental Illness (SAMI). This decision was due to a convergence in the fall of 2013 of strong political interest on the SAMI population, new evidence on an effective intervention, and new economic impact data on the impact of co-occurring homelessness, mental health and addiction. Selecting the SAMI population as the target for a SIB was based on indications that the foundations for an effective SIB could be put in place with relatively few obstructions. There is also clearly demonstrable need for new and innovative approaches to providing supports to this large and complex population.

What follows is an analysis of the current landscape of support for individuals with severe addiction and/or mental illness in Vancouver. While this is not an exhaustive analysis of the issue by any means, it functions to illustrate how the SIB funding model could complement existing efforts to support this population. Further, it demonstrates gaps in the current landscape of service provision that a SIB could address through its performance oriented structure. To assess the existing ecosystem of support services for individuals with SAMI, we conducted interviews with service providers, health professionals, government and government agencies, as well as supportive housing funders.

6. Social Finance UK, "Guide to Social Impact Bond Development" (Social Finance UK, January 2013).

## 5.2 SUPPORTIVE HOUSING MODELS IN VANCOUVER

There are numerous housing support models in service of individuals with severe addiction and mental health. This 'continuum' of housing for individuals with severe addiction/mental illness in Vancouver has been well documented in existing research.[7] As such, we are not presenting an in depth discussion of the various models in operation.

Rather, our interviews were focused on identifying gaps in the current models of supportive housing in Vancouver. Our interviews focused primarily on low barrier congregate models of housing with varying levels of supports attached, given that this is the model of housing most broadly deployed locally.[8]

## 5.3 GAPS IN THE EXISTING SERVICE CONTINUUM

This analysis is drawn from interviews with service providers, government, funders, health, sector professionals, and the municipal police, all of whom are stakeholders in the currently dominant approach to housing individuals on the SAMI spectrum. The three themes presented below were recurring across all of our interviews. We have not provided direct citations to protect the interests of interviewees.

### Accountability and Best Practice

In many provincially funded supportive housing projects, there are low levels of accountability for non-profit organizations that retain operating control of a housing asset. Contracting agreements currently do not provide all stakeholders in a project with adequate levels of oversight or control of how supports are delivered. This lack of accountability has given some operators free rein to run supportive housing buildings according to whichever support model they deem most appropriate, whether or not there is a strong supporting evidence base for their approach.

While these operators are providing a valuable service that is a positive alternative to the shelter system, health outcomes for tenants with multiple diagnoses are still troublingly negative.[9] Bolt-on mental health and addiction supports have been funded through healthcare; however the autonomy of housing operators to manage buildings according to their own principles can undermine the impact of additional health supports. For example, if a housing operator fails to prevent drug dealing in a building, vulnerable tenants can be dramatically victimized, and any externally operated tenant support initiatives undermined.

7. Michelle Patterson et al., "Housing and Support for Adults with Severe Addictions And/or Mental Illness in British Columbia" (2008), http://summit.sfu.ca/item/11157

8. Annitta Lee, Supportive Housing Strategy for Vancouver Coastal Health's Mental Health & Addictions Supportive Housing Framework (City of Vancouver, 2007).

9. Fidel Vila-Rodriguez et al., "The Hotel Study: Multimorbidity in a Community Sample Living in Marginal Housing," American Journal of Psychiatry 170, no. 12 (December 1, 2013): 1413–1422, doi:10.1176/appi.ajp.2013.12111439.

### Effective Measurement

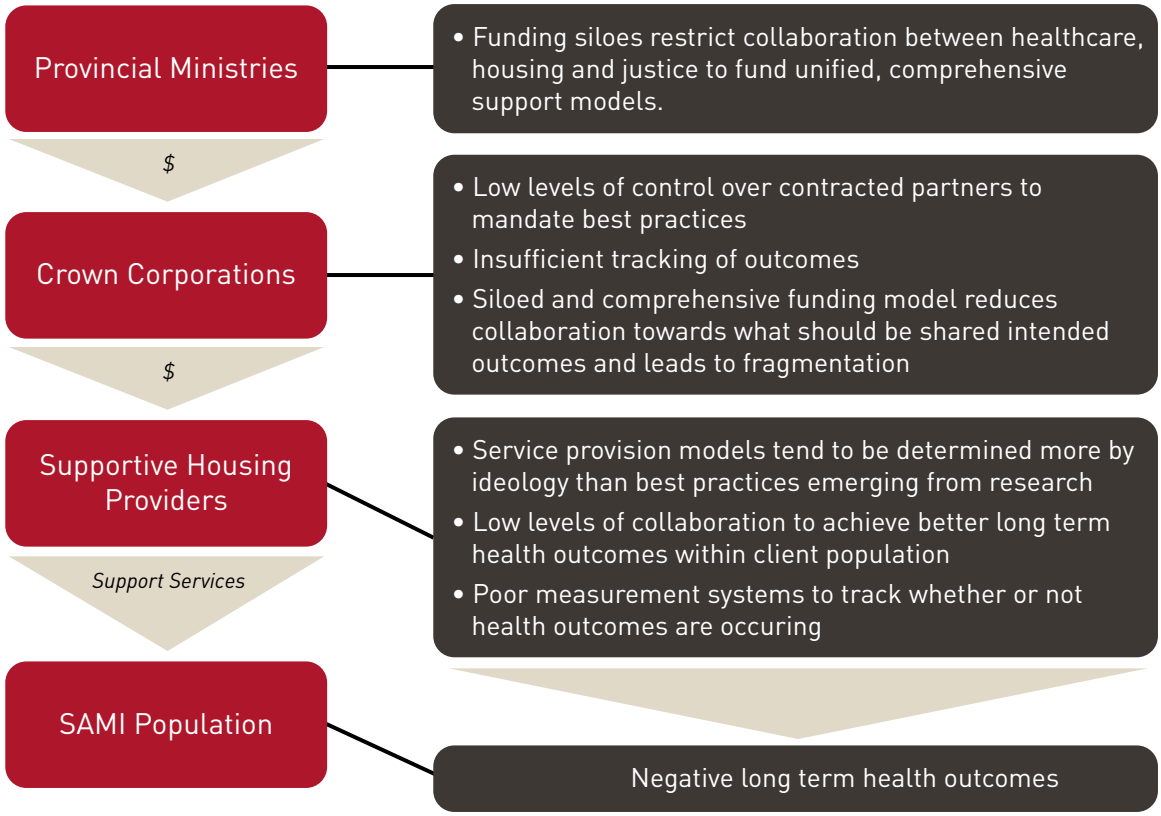
Other than the few external academic studies which have been completed on residents living in supported housing in the Downtown Eastside, there is often little measurement of whether the health of tenants with multiple diagnoses improves once housed. Comprehensive evaluations of health outcomes and quality of life indicators are rarely attached to tenants in a rigorous way. Similarly, there are basic freedom of information barriers restricting measurement of cross-agency service use reductions/ increases, making it difficult to track comprehensive outcomes for a tenant across agency boundaries.

### Fragmentation of the Support Continuum

Existing funding lines do not facilitate strong inter-agency collaboration on tenant health outcomes. While multiple agencies might be supporting a single individual, there is often little collaboration between housing providers, health care providers, mental health teams, and police on how best to treat an individual. Limited operational mandates necessitating referrals can lead to disjointed continuity of care for individuals. For example, while police may be able to identify individuals who are decompensating rapidly, there may be no options to refer these individuals to appropriate supports if local mental health teams are at capacity.

We have illustrated the chain of accountability and existing gaps in management and delivery below.

Figure D



# 6 Housing First and Assertive Community Treatment

The national At Home/Chez Soi study, funded by the Mental Health Commission of Canada, demonstrated the effectiveness of a 'Housing First' approach over the more traditional 'continuum' model of housing.[10] This landmark study demonstrated that there can be best practice in how individuals are housed and supported.

## 6.1 PRINCIPLES

Housing First is an evidenced based approach to supporting individuals who are homeless, providing immediate access to permanent and independent housing, as well as optional mental health support services. According to the Mental Health Commission of Canada,[11] the core principles of the intervention model are:

**Unconditional access into the program**
Participants do not need to meet any minimum thresholds in terms of mental health or sobriety.

**Choice**
Participants are offered the choice of a residence that could be in a congregated supportive building, or more preferably, a private residence in a neighbourhood of their choosing.

**Individualized Support Services**
Housing First provides voluntary support teams that are portable and professionally qualified to support a range of needs from substance abuse to employment to mental health.

**Social and Community Integration**
Opportunities for community engagement near a participant's new residence are facilitated as an optional part of the program. These activities provide opportunity for socialization into a participant's new neighbourhood.

10. Main Messages from the Cross-Site At Home/Chez Soi Project (Ottawa, Ontario: Mental Health Commission of Canada, October 28, 2013).
11. Paula Goering, At Home/Chez Soi Interim Report (Ottawa, Ontario: Mental Health Commission of Canada, September 2012).

## 6.2 SERVICE MODELS – ACT/ICM

At the core of the Housing First Model are two alternative support models, each appropriately tailored based on client need. The following descriptions are taken directly from the At Home/Chez Soi project methodology.[12] These definitions of ACT comply with the BC provincial standards for the provision of ACT.

### Assertive Community Treatment (ACT)

ACT provides multi-professional intensive service for people with serious mental health issues. ACT teams provide a range of supports directly to individuals living in the community (e.g. recovery and wellness services; peer support; integrated mental health and addictions supports). Services and crisis coverage are available 24 hours, 7 days per week. ACT operates on a staff to client ration of 1:10.

### Intensive Case Management teams (ICM)

ICM provides intensive case management services to individuals with 'moderate' needs. Case managers provide outreach and coordinate with other programs to help people access necessary services. Teams are available 12 hours/day and function with a staff to client ratio of roughly 1:15.

## 6.3 AT HOME CHEZ SOI

At Home/Chez Soi was a nationally funded study, sponsored by the Mental Health Commission of Canada. At Home demonstrated the w of a Housing First approach to supporting homeless individuals with SAMI, and provided the necessary evidence base to scale Housing First programs broadly. The substantial evidence base provided by At Home/Chez Soi demonstrates not only improved primary health outcomes through the provision of Housing First, but significant impacts related to quality of life as well.[13]

12. Ibid.

13. Main Messages from the Cross-Site At Home/Chez Soi Project (Ottawa, Ontario: Mental Health Commission of Canada, October 28, 2013). Social Finance UK, "Guide to Social Impact Bond Development" (Social Finance UK, January 2013).

# 7 Funding a Housing First Intervention with a Social Impact Bond

## 7.1 FEASIBILITY TEST

This basic, high level framework for establishing the feasibility of a Social Impact Bond is drawn from the work of Social Finance UK and Finance For Good.[14] [15] This framework tests the political will to resolve a particular social issue, the measureable impact of an intervention, the economic benefits of early intervention and prevention, and the capability of service providers to deliver positive outcomes.

## 7.2 POLITICAL WILL

In September 2013, the Vancouver municipal government declared a mental health crisis on the streets of Vancouver.[16] This was in light of a spike in incidents of random violence amongst individuals with mental health and increasing pressure on existing mental health services. The Vancouver Police Department published extensive data on mental health related policing incidents, and has been a proponent of further supports to reduce improper police contact.[17] This increased focus on addressing the needs of the SAMI population nests with the municipal government's goal to end street homelessness by 2015. There are strong crossovers between the SAMI population and the street homeless in Vancouver, and the municipal government is directing significant attention to both as public issues.

The recent political attention on individuals with concurrent mental illness and addiction has been met with limited new funding from the Ministry of Health and Vancouver Coastal Health. This funding is focused on improving acute care facilities and service provision within hospitals. Additionally, there has been a commitment to provide additional ACT services from within Vancouver Coastal Health. This additional funding only provides a small portion of the complete need for services by this population. There is a clear opportunity to supplement existing committed funding with financing that would leverage a large pool of private capital.

14. Social Finance UK, "Guide to Social Impact Bond Development" (Social Finance UK, January 2013).
15. Finance For Good, "Assessing the Opportunity to Improve Social Outcomes Through the Use of Social Impact Bonds" (Finance For Good, February 26, 2013).
16. Jeff Lee, Vancouver Sun September 14, and 2013, "Vancouver Mayor and Police Chief Say Alarming Trend of Violent Attacks Signals Mental Health Crisis," Www.vancouversun.com, accessed December 18, 2013, http://www.vancouversun.com/health/Vancouver+mayor+police+chief+alarming+trend+violent+attacks+signals+mental+health+crisis/8909307/story.html.
17. Vancouver Police Department, Vancouver's Mental Health Crisis: An Update Report (Vancouver, September 13, 2013).

## 7.3 MEASUREABLE IMPACT

At Home/Chez Soi has demonstrated that it is possible to measure an individual's public system service use with the right controls on consent and data management. Similarly, VICOT (The Victoria Integrated Community Outreach Team), has managed to track the impact of its supports on broad public system service use.[18] Strong consent measures, and a focus on improving participant health improvements have safeguarded the collection of appropriate data (from police contacts to inpatient days) to measure program outcomes.

A SIB would be ideally focused on reducing the comprehensive public sector service use of individuals with concurrent barriers. To this end, there is an already established inter-ministerial committee focused on information and data sharing for this population. This a significant pathway to measuring impact that has already been established, and would ideally be incorporated into a SIB model.

## 7.4 ECONOMIC LINKS

At Home/Chez Soi has demonstrated the aggregate cost savings that can accrue to the public by supporting people through a Housing First intervention.[19] While site specific costing data has not been released to the public, early reports of the Vancouver implementation highlight long term cost effectiveness.[20] The aggregated data suggests that across a sample of individuals on the spectrum of severe addiction and/or mental illness, there are cost savings to be had in the range of $20-31,000. In light of interventions that could be designed to cost no more than $18,000 per supported individual, the high level economic case for a Social Impact Bond is fairly clear. Important to note in this analysis is that these estimates for the cost of an untreated SAMI population are based on averaged cost estimates of hospital and justice system use (See Appendix A for a more thorough discussion of the average vs marginal costing issue).

Macro studies of the cost of homelessness in Canada demonstrate that the costs of leaving high needs individuals on the street is not cost effective.[21] While these studies can often overstate the total cost of homelessness in aggregate, they demonstrate the cost burden on the public of high needs users in particular (see the discussion in Appendix A).

A fully detailed and comprehensive economic model will be built on release of the final report from At Home, and once an intervention has been designed and vetted through a comprehensive SIB design phase.

18. Vancouver Island Health Authority, Victoria Integrated Community Outreach Team (VICOT) Annual Report for 2011 (Victoria, April 2012).
19. Paula Goering, At Home/Chez Soi Interim Report (Ottawa, Ontario: Mental Health Commission of Canada, September 2012).
20. Lori Culbert et al., "Housing Vancouver's Mentally Ill Costs Little More than Leaving Them on Street: Study," Www.vancouversun.com, accessed December 18, 2013, http://www.vancouversun.com/news/Housing+Vancouver+mentally+costs+little+more+than+leaving+them+street+study/9074651/story.html.
21. Stephen Gaetz, "The Real Cost of Homelessness" (2012), http://excellentfuture.ca/sites/default/files/The%20Real%20Cost%20of%20Homelessness.pdf.

## 7.5 SERVICE PROVIDER CAPABILITY

While there are numerous agencies providing housing and support services to individuals on the SAMI spectrum in Vancouver, there are few that are delivering services according to the best practices emerging out of academic research. This is a product of funding lines which have prioritized housing people in low barrier SRO's, without necessarily targeting comprehensive health outcomes. Interviewees have also suggested that ideology plays a significant role in shaping the intervention methodologies of many non-profit service providers. This can be a significant barrier in to complying with a mandated treatment methodology that might accompany government funding for service. While capacity to deliver services is clearly present, it is less clear whether there are an adequate number of organizations sufficiently equipped to deliver supports in fidelity to a prescribed, intensive model such as ACT. A SIB would mandate greater accountability for achieving health outcomes, and would add rigor to service delivery that is currently lacking.

# 8 Defining the Intervention

Social Impact Bonds facilitate experimentation with the boundaries between proven interventions.

There is a broad evidence base for ACT in the context of effectively treating homeless individuals with multiple disorders.[22] Through a SIB funded model, there is the opportunity to adapt ACT to the specific needs of the Vancouver context while gathering data on a handful of strategic adjustments to the basic ACT formula.

An adapted ACT service model would enable greater scale of delivery, tailoring of services to a wider range of individuals on the mental health and addiction spectrum, and an improved ability to appropriately adapt services as an individual's level of need changes over time. We are not necessarily advocating for these changes to the basic ACT model, but presenting them as options for innovating on the current approach through the Social Impact Bond structure.

## 8.1 DESIGN PRINCIPLES

The Provincial ACT Standards outline the required components of providing ACT services to individuals with mental health and/or substance abuse disorders.[23] To be classified as ACT, a service provider must demonstrate fidelity to these standards based on well establish fidelity measurement tools. Adapting ACT to a more flexible and scalable service model thereby necessitates diverging somewhat from established fidelity measures. While the resulting end service may not comply with the current BC Program Standards for ACT, the general principles outlined in this document are useful building blocks for designing an adapted service. The following design principles for a SIB funded service model are paraphrased from the BC Program Standards for ACT.[24]

1. The intervention would serve individuals with serious mental illness and substance abuse disorders. Specifically targeted would be high needs individuals who are not served appropriately through traditional healthcare channels.

2. The service would be based on an interdisciplinary team with explicit mental health training partnering to provide a variety of complementary treatment services.

3. The program must be available 24 hours a day, seven days a week, with specific service provision defined by client need. Frequent contact clients would be shared by the entire support team.

22. M.D., M.P.H. ,Craig Coldwell and M.P.H., William Bender, "The Effectiveness of Assertive Community Treatment for Homeless Populations With Severe Mental Illness: A Meta-Analysis," American Journal of Psychiatry 164, no. 3 (March 1, 2007): 393–399, doi:10.1176/appi.ajp.164.3.393.

23. British Columbia and Ministry of Health Services, British Columbia Program Standards for Assertive Community Treatment (ACT) Teams (Victoria, B.C.]: Ministry of Health Services, 2008), http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/457260/BC_Standards_for_ACT_Teams.pdf.

24. Ibid.

4. Clients would determine the goals and preferences that would shape their treatment. Treatment is built on a relationship-building approach, enabling clients to have a participatory role in achieving goals, improvements in functioning, and managing symptoms.

5. Provider teams must be mobile and able to meet clients in their own residence. 75% or more of client contacts must be made outside of program offices in client determined locations.

6. The service must be provided on an ongoing basis to ensure continuity of care. Long term recovery goals would be supported by continuous service that enable clients to both graduate through various stages of recovery or decompensate, without ever leaving the umbrella of unified service provision.

7. Clients with the most serious treatment needs would be given priority access to the program, and once admitted, given continued access to the provision of services.

## 8.2 SERVICE DELIVERY INNOVATIONS

The following innovations on the basic ACT model would facilitate adaptive support for individuals with a variety of changing needs, while enabling rigorous data collection and collaboration between the various agencies and ministries providing client care.

### Adaptive Support Intensity

There is currently limited data on how an individual's need for ACT changes over time. While ACT was designed to be provided for life, there is an increasing focus on recovery models within mental health client care. Leading ACT researchers have explored how a program can maintain fidelity to the ACT model while integrating recovery oriented approaches to care.[25] However, there is still a gap in research on the rate at which a random sample of individuals on the SAMI spectrum moves through various stages of recovery within ACT.

There is some indication from ACT practitioners that ACT itself may be too rigid a tool to adapt appropriately to individuals in recovery. While some individuals with concurrent diagnoses will require ACT services at their full intensity for the duration of their life, many individuals with mental health challenges may not. As recovery increasingly becomes a focus of mental health care, it is important that individuals who 'graduate' from needing a full ACT team are provided strong continuity of care. The referral system does not adequately support individuals graduating through various levels of care.

Structuring adaptive intensity into a SIB funded service model would enable granular reductions in service intensity appropriate to individuals' stage of recovery without transitioning individuals to a

25. Michelle P. Salyers and Sam Tsemberis, "ACT and Recovery: Integrating Evidence-Based Practice and Recovery Orientation on Assertive Community Treatment Teams," Community Mental Health Journal 43, no. 6 (May 21, 2007): 619–641, doi:10.1007/s10597-007-9088-5.

different support team. This continuity of care through a single support model would facilitate stronger case management and client collaboration towards achieving health outcomes.

Most importantly, it would allow individuals to decompensate without exiting or entering a single ecosystem of support.

### Longitudinal Outcomes Assessment

A social impact bond delivered for 8-10 years would provide the opportunity to study the effects of adaptive supports for a single cohort over a relatively long period of time. Tracking of a variety of health outcomes, as well as impact factors such as criminal justice contacts, inappropriate health care service use and police interactions, would provide an even stronger evidence base for integrated care models.

Data on the rate that individuals with SAMI graduate through various levels of care in aggregate would enable better provision of these supports in the public system broadly, and ideally lead to broader changes to the current models of fragmented case management.

### Wrap-Around Support Model

A SIB funded model would provide comprehensive supports, from tenant-appropriate housing, to psychiatric care, to substance abuse support, to clinical care, to integrated pharmaceutical provision. Integrating multiple services under one coordination umbrella enables better health outcomes and greatly improved quality of life indicators.[26]

While ACT is principled on integrated services and case management, there is still room to explore new additions to the suite of supports provided through ACT. One such example is pharmaceutical care. Non-adherence to medications is a large barrier to improved mental health outcomes, especially for individuals with concurrent severe addiction.[27] The fragmented manner in which health, social and mental health services are delivered makes it challenging for individuals requiring complex care to be supported in their medicinal regimen. Given that individuals' primary health care contact (such as the emergency room for instance), may not be interfacing with their psychiatrist, support worker, and pharmacist, it is difficult to establish strong continuity of care, ensuring an individual is complying with their various prescriptions.

Integrating a team of clinical pharmacists within the pool of support services would enable tight links between clinical care providers, psychiatrists and pharmacists, and ensure that individuals are being supported to adhere to their medication plans by an entire team of diverse service providers.

26. Main Messages from the Cross-Site At Home/Chez Soi Project (Ottawa, Ontario: Mental Health Commission of Canada, October 28, 2013).

27. Marvin S. Swartz et al., "Violence and Severe Mental Illness: The Effects of Substance Abuse and Nonadherence to Medication," American Journal of Psychiatry 155, no. 2 (February 1, 1998): 226–231.

The BC government is continually expanding the scope of practice for clinical pharmacists, allowing them to perform many of the clinical tasks previously reserved for physicians. By leveraging these opportunities for clinical services, a support team can operate at a lower cost and potentially include more healthcare practitioners if necessary.

Finally, there is an opportunity to operate specialized programs for targeted health issues in partnership with generic pharmaceutical companies. Specialized medication programs can be arranged in partnership with major pharmaceutical companies to offset costs or provide additional support services.

### Inter-Agency Coordination and Data Collection

Integrated case management is an innovation that has been widely evidenced to improve case management outcomes, and has a precedent in Vancouver in the form of At Home/Chez Soi.[28] Similar to the integrated model deployed through At Home, the Victoria Integrated Community Outreach Team (VICOT) established formal relationships with policing and the Ministry of Social Development to collaborate on achieving improved health and service outcomes for its clients.[29] While operated by the Vancouver Island Health Authority, partnerships with other agencies and ministries enabled comprehensive coordination of supports. These included structuring welfare and disability payments appropriate to client needs, and pairing police and clinical providers together in situations where an individual was severely decompensating.

In the case of At Home and VICOT, these partnerships enabled stronger simultaneous data collection on the individuals being targeted for support. This comprehensive data enables all agencies and governmental bodies providing care to track the impacts of an integrated support model.

Integrating data collection from the full complement of service supports provided within the SIB funded model with external data from health, policing, criminal justice and the Ministry of Social Development could enable tighter measurement of outcomes, and stronger coordination of care.

28. Paula Goering, At Home/Chez Soi Interim Report (Ottawa, Ontario: Mental Health Commission of Canada, September 2012).

29. Vancouver Island Health Authority, Victoria Integrated Community Outreach Team (VICOT) Annual Report for 2011 (Victoria, April 2012).

# 9 The Path to a Commissioner

Social Impact Bonds cannot exist without a government commissioner. As such, our recommendations stem from where we see the greatest alignment between governmental or ministerial mandate and the programmatic outcomes of a Housing First focused SIB.

The SIB as a funding tool is most simply deployed when the funded outcomes primarily fall within the mandate of a single governmental ministry. For instance, recidivism related SIBs have been directed from within justice ministries, where the costs and benefits of programming can be easily captured within a narrow government mandate.

In the case of serving those with concurrent mental illness and addiction, the costs and benefits of preventative programming are not proportionately distributed. Building new supportive housing would cost the Ministry of Housing in the short term, while reducing healthcare and justice system contact in the long term. Evidence from our interviews suggests that a well-managed building will increase police contacts in the immediate term, and reduce these contacts over the long term. Alternatively, leaving these individuals on the street would cost The Ministry of Housing little, while health, justice and policing costs would remain the same or increase.

A SIB benefits a government when it can reduce long term costs that it would otherwise incur. Insofar as costs and benefits are not uniformly distributed across public ministries, selecting a single commissioning ministry becomes less straightforward. Given data from At Home/Chez Soi, there are clear economic benefits that accrue to the criminal justice and healthcare systems, making commissioning a SIB from either of these ministries a natural fit. Ideally however, a SIB would not be commissioned out of a particular ministry but rather would be a joint effort from within the provincial government. With collaboration being a central feature of the SIB model, an inter-ministerial partnership in commissioning the bond would ensure a focus on achieving comprehensive health and well-being outcomes for the target population. A partnership on commissioning would lay a strong foundation for collaboration further down the SIB chain.

# 10 Identifying Impact Metrics

## 10.1 THE BASKET OF MEASUREMENT OPTIONS

There are multiple ways that outcomes resulting from a SIB funded intervention could be measured. The suite of potential evaluation methods range from being low in cost and complexity, to extremely high in cost and complexity. The methodology ultimately selected will be determined by a range of considerations including whether or not new knowledge needs to be generated through the SIB intervention, operational and pragmatic constraints, ethical requirements, as well as institutional preferences.

Given the content of the SIB we are outlining in this report, there are some study designs that naturally lend themselves to this model.

| Study Methodology | Advantages | Disadvantages |
|---|---|---|
| **Randomized Control Trial (RCT)**<br><br>Random selection of a sample within a population assigns individuals to either a treatment group or a control group. Randomization statistically satisfies the requirement that treatment or no treatment are the only distinguishing factors between the groups. | This is the most comprehensive evaluation methodology for determining whether or not an effect has occurred. The RCT facilitates causal inference to a level that no other study methodology is able to. This has important implications for accurately determining treatment effects. | RCT's require significant amounts of resources to be successfully deployed. The logistical challenges of coordinating measurement across a control group and a treatment group (especially in the context of street homelessness) can make an RCT unviable.<br><br>Concerns have been raised around excluding a control group from access to potentially life-saving services given that resources are being allocated to measuring the effects of no treatment. This is a fundamental feature of an RCT that SIB stakeholders will either be comfortable with or not. |
| **Propensity Score Matching (PSM)**<br><br>PSM is an observational study method that can be employed when random assignment and control/treatment grouping is not possible. Control groups are constructed based on similar characteristics between the control group and treatment group, despite underlying systemic differences between the two populations. | PSM facilitates measurement of treatment effects within an observational study, often times where treatment and control groups are self-selected and differ fundamentally.<br><br>Observational studies are conducted when an RCT is not feasible or ethical considerations restrict random assignment, thus making them more flexible for field measurement. | Inferring causality from a propensity score matched study is not as straightforward as with a random control trial. Given the systemic differences between the control and treatment populations, it is more difficult to infer causality between treatment and effects. |

| | | |
|---|---|---|
| **Historical Baseline**<br><br>This method uses existing data from studies on similar populations to develop a control group. The treatment group is compared to the data from the historical control group to determine the effects of treatment. In this method, the populations being compared (the historical and the treatment group) need to be characteristically similar enough to allow meaningful comparison. | This is the most straightforward method for determining effects in that a control group is derived from historical data. The only active measurement that must be done is of the population receiving the treatment through an intervention. | The historical control group is not necessarily a strong proxy in the context of a study attempting to measure effects. If underlying conditions have changed such that the historical data is no longer contextually relevant, findings will be of limited statistical use. More importantly, if the characteristics of the population being studied have changed or are not adequately captured in the historical control group, the resulting data will not provide a strong base for causal inference. |

Of these methods, the random control trial is the ideal choice for evaluating the outcomes a large scale SIB intervention. If an RCT proves to be unfeasible due to operational or financial considerations, a propensity score matched study would provide the next best method for estimating SIB impact.

## 10.2 DEFINING APPROPRIATE DATA SETS

Selecting data sets to be used in the analysis of outcomes is one of the most significant decision points to be made in designing a SIB. The information that is used to determine whether or not an outcome has occurred must be closely tied to the treatment effects and not influenced by variables that are unrelated to the treatment. For instance, a SIB aimed at reducing street homelessness would not be well served by an outcome metric tracking aggregate street homelessness in a geographic region – there would be too many variables external to the SIB treatment that could influence the final numbers. A more appropriate metric would be annual days of homelessness in the treatment group against annual days of homelessness in the control group. Appropriately bounding the data set under measurement so that exogenous variables could not impact the results is a primary consideration in selecting what to measure.

The following is a list of metrics that would be appropriate to a Housing First focused SIB aimed at reducing public system service use. All of these metrics rely on obtaining consent from individuals who are receiving treatment as data is collected not from individuals themselves, but from the public system services they are interacting with.

| Metric | Why it is appropriate |
|---|---|
| Emergency Room Visits | Individuals with concurrent mental illness and severe addiction have high emergency room usage.[30] This population will end up in the emergency room for a variety of reasons including substance overdose, de-compensation, or a combination of substance use and mental illness. |
| Police Contacts | It is well documented that police are often the first point of contact for individuals on the SAMI spectrum.[31] |
| Inpatient days | Individuals who end up in the emergency room will often have extended stays in the hospital as a result of health episodes. This has capacity implications and impacts the long run planning horizon for hospitals. Inappropriate hospital stays prevent appropriate hospital use by individuals that need it. |
| Justice system contacts | The reliance on police as front line service providers leads to higher incidences of interaction with the justice system. Court contacts and prison stays are costly and again impact the capacity of the justice system. |

30. Gaetz, Stephen. "The Real Cost of Homelessness" (2012). http://excellentfuture.ca/sites/default/files/The%20Real%20Cost%20of%20Homelessness.pdf.

31. RSM Richter & Associates. *Report on the Cost of Homelessness in the City of Calgary*. Calgary, AB, January 28, 2008.

# 11 Social Impact Bond Legal and Operating Structure

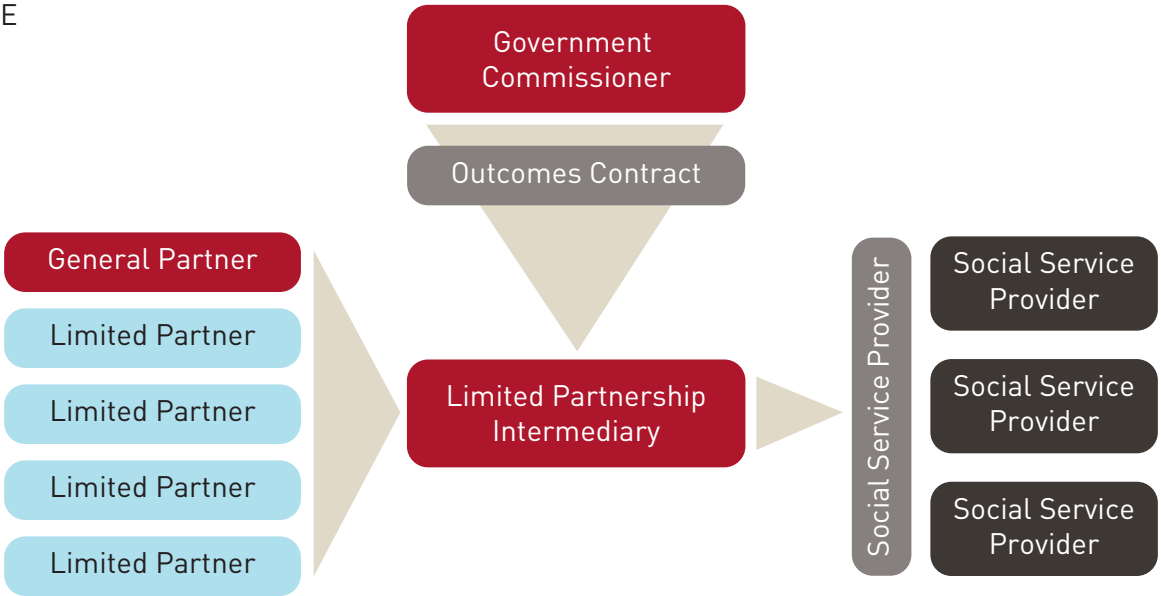
## 11.1 STRUCTURING THE INVESTMENT VEHICLE

Structuring the investment vehicle that sits at the center of the SIB is perhaps the most complex feature of the model. A SIB is a contract whereby investors front capital on the assumption that they will be paid back contingent on social outcomes being achieved. Rather than attempting to structure a single complex security with multiple moving parts, existing SIBs have avoided this through structuring investments as partnerships. In this scenario, a lead investor would take on the role of a general partner in a limited partnership. Other investors could acquire shares as limited partners, but would not bear the same level of liability as the general partner.

The limited partnership in this scenario would act as the SIB intermediary. Investors would invest in the LP, which would employ a team of managers tasked with achieving the intended outcome of the SIB. This team of performance managers would oversee the SIB intervention, contracting with individual service providers as necessary. The limited partnership would contract separately with the government for the SIB related outcomes. Government would agree to pay the LP the set principle and rate of return conditional on an evaluator determining that outcome payments are to be made.

This structure for the SIB has been adapted from the models used in the UK for existing implementations. Its primary advantage in BC is the avoidance of securities regulations requiring the issuance of a formal prospectus, presuming all potential investors are accredited, or qualify under the other exemption rules outlined by the BC Securities Commision.

Figure E



The intermediate entity must have the capability to receive investor funds, contract with government for outcomes and deliverables, manage contracts with service providers, and ultimately flow through repayment funds back to the original investors.

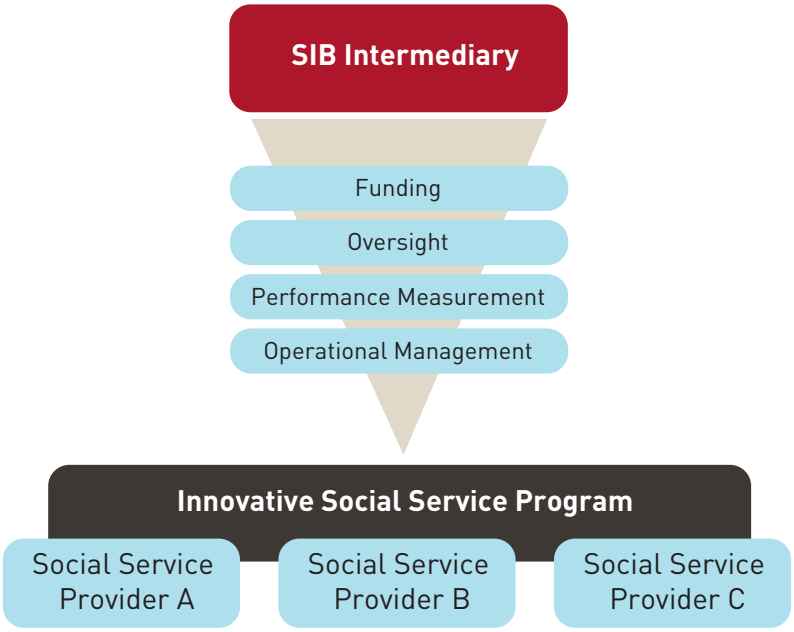
## 11.2 DEFINING AN OPERATING STRUCTURE

Social Impact Bonds in the UK and the US have taken fairly similar approaches to selecting an operating structure. An intermediary organization, directly funded by investors, has made the commitment to achieving the designated outcome. The intermediary hires for key management roles and ensures that outcomes are being achieved by contracted service providers. Centralizing data collection, operations management, and ongoing performance measurement enables the intermediary to share ongoing results with all participating organizations, and collaboratively overcome barriers to achieving the intended outcome.

Central to this structure (outlined below) is the ability to contract out for specific baskets of services. This is a key feature of a SIB intermediary organization. It ensures that the outcomes for which the intermediary is responsible are not undermined by a poorly performing service agency. If an agency is not achieving the types of results necessary for the intermediary to receive repayment from the commissioner, the agency can be replaced with another through a bidding process. This flexibility reduces the risk that is borne by the investors of service provider hold up.

The recommended operating structure for a SIB is outlined below, with indication of the primary roles played by each partner.

Figure F



# 12 Financial Modeling

At the feasibility stage of evaluating a SIB, true pro forma analysis is of limited utility. Without a finalized intervention design, investors, an intermediary organization or contracted service providers, it is impossible to determine the exact costs of delivering a SIB.

Further, without a commissioner backing the investment, there can be no determination of size or scope.

That said, this report includes some preliminary modeling of what a SIB might look like in financial terms based on the recommendations outlined in previous sections of our report. The municipal government has indicated that there are roughly 300 individuals who fit the SAMI criteria and require immediate high intensity supports. We have used this figure as our starting point for costing out a Social Impact Bond.

Three variations of ACT were prototyped to model how common inputs such as staff and overhead can be scaled over a larger population of clients. While these models will not be determinative of the final intervention that is funded through the SIB, they enable rough costing with different arrangements of clinical staff. We did some basic cost estimation of the three different scenarios, and have used the middle estimate for staffing costs in the pro forma below.

The following table outlines the assumptions behind the pro forma that follows and details each line item.

| | |
|---|---|
| Number of Participants | 300 Severely Addicted/Mentally Ill individuals. |
| SIB Length | 10 Years |
| Clinical Program Intervention Cost | $9990 per person per year is a middle estimate of the clinical costs of an adapted ACT team. This adapted ACT model scales delivery over a larger number of individuals and reduces duplication of fixed inputs by centralizing case management. |
| Intermediary Performance Management Costs | These are the costs of performance management that are carried out through the intermediary |
| Housing Costs | This figure is assuming a SIB contributes 50% of the required capital costs to provide housing to participants |
| Legal Costs | This is a high estimate of the legal costs of structuring the SIB vehicle through contracts and incorporation. This also assumes an exemption for a prospectus as outlined in our investment structure section. |

| | |
|---|---|
| Tenancy Costs | These are the tenancy costs for the intermediary organization from which the service providers would be managed. |
| Independent Evaluator Cost | The evaluator leads the design of the study, and is responsible for determining whether a statistically significant effect has occurred, triggering repayment from commissioner to investors. |
| Principal and Return Repayment | The structuring of the repayment would be dependent on negotiations between investors and the commissioner. Here we have assumed an investor return of 6% annually. |

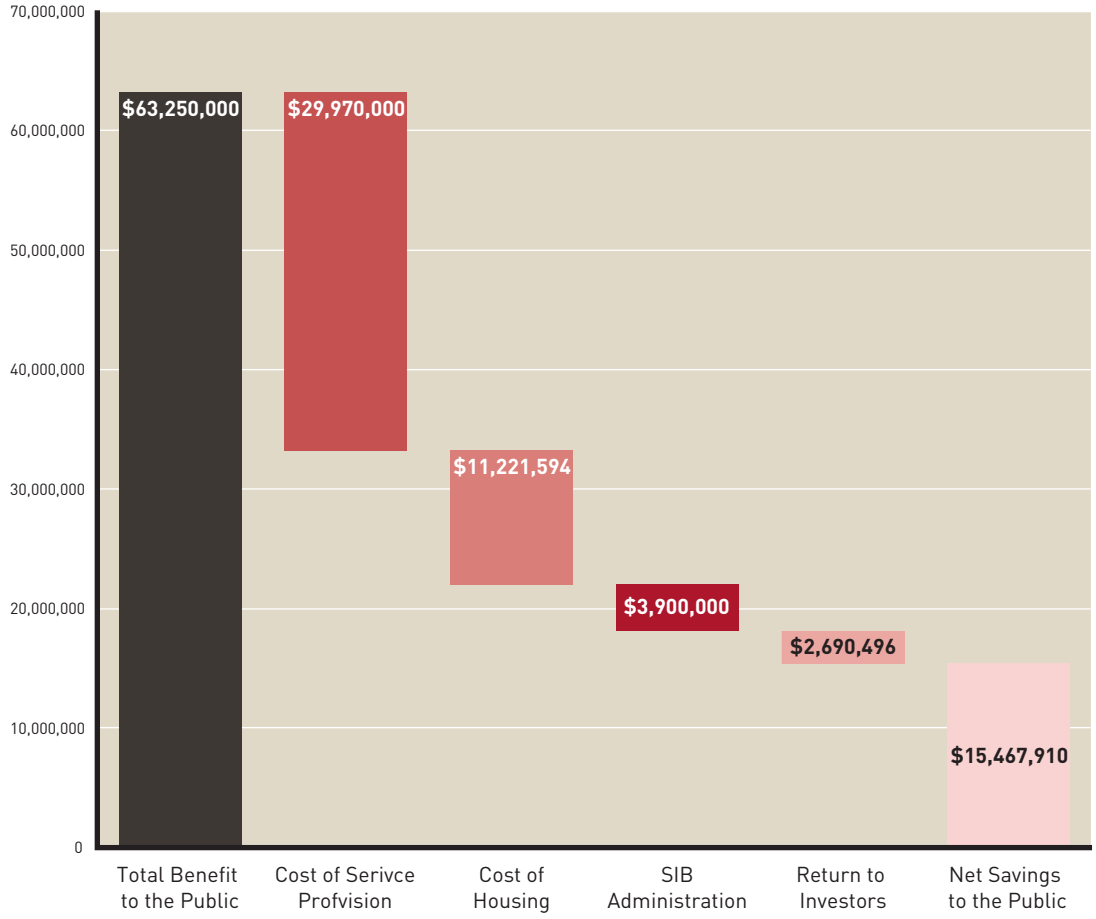
Over 10 years, the distribution of costs and benefits as follows:

| Expenditures (in 000's) | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Program Intervention Cost | 2997 | 2997 | 2997 | 2997 | 2997 | 2997 | 2997 | 2997 | 2997 | 2997 |
| Intermediary Performance Management Costs | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 |
| Housing Cost | 1122 | 1122 | 1122 | 1122 | 1122 | 1122 | 1122 | 1122 | 1122 | 1122 |
| Legal Costs | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tenancy Costs | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Independent Evaluator Cost | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Total | 4734 | 4484 | 4484 | 4484 | 4484 | 4484 | 4484 | 4484 | 4484 | 4484 |

| Revenue (in 000's) | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Principal Repayment to Investors | | | | | 22670 | | | | | 22420 |
| Additional Return | | | | | 1360 | | | | | 1345 |
| Total | 0 | 0 | 0 | 0 | 24030 | | | | | 23765 |

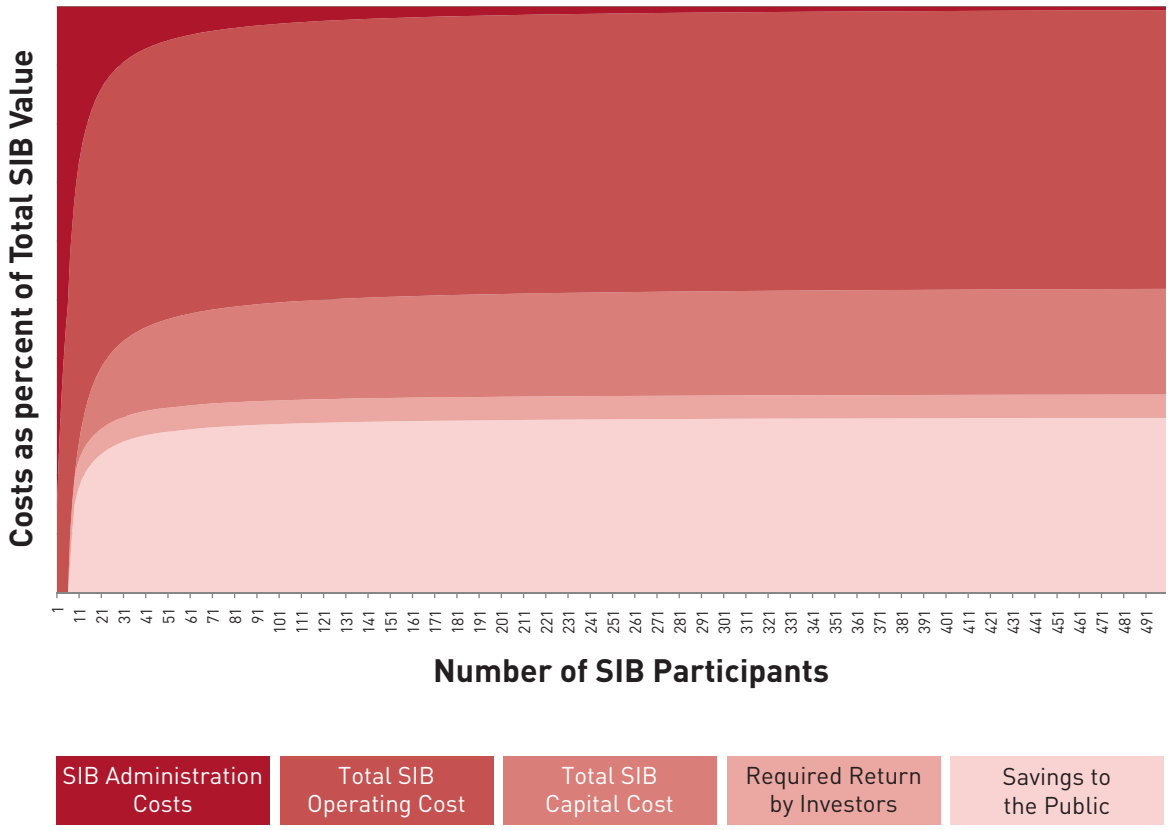
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Net Cumulative Investor Cashflow | -4734 | -9218 | -13702 | -18186 | 1360 | -3124 | -7608 | -12092 | -16576 | 2690 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Estimated Annual Savings to the Public | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 |
| Net Cumulative Savings to the Public | 6300 | 12600 | 18900 | 25200 | 7470 | 13770 | 20070 | 26370 | 32670 | 15467 |




The following chart illustrates the percentage breakdown of costs to public savings within the SIB at different numbers of participants. Given the high administration costs of a SIB, there is a minimum size required for a SIB to maximize the return to the public. In this particular scenario, given the assumptions previously outlined, savings to the public begin to plateau as a percentage of total SIB value at 110 participants, or a total SIB value of $14,300,000 over 10 years.

This is an important piece of analysis to undertake in any proposed SIB model if public gains are to be maximized given the relative complexity of the financing vehicle.


Costs as percent of Total SIB Value
1
11
21
31
41
51
61
71
81
91
101
111
121
131
141
151
161
171
181
191
201
211
221
231
241
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281
291
301
311
321
331
341
351
361
371
381
391
401
411
421
431
441
451
461
471
481
491
Number of SIB Participants
SIB Administration Costs
Total SIB Operating Cost
Total SIB Capital Cost
Required Return by Investors
Savings to the Public

# 13 Options for implementing a Housing First Social Impact Bond

Social Impact Bonds present an opportunity to transform the way that individuals on the SAMI spectrum are supported. As an individual funding tool, they are innovative, and present the opportunity for governments to de-risk their investments in new, leading edge programming such as Housing First.

We believe that the tool is not only an innovative funding model, but also a means to lead innovation in primary program delivery. At its most ambitious, the Social Impact Bond is a tool to model total system redesign, restructuring and reorganizing how support systems are delivered to a target population. At its most conservative, SIBs are a way to pull an evidenced based intervention out of the academic realm and into a sustained public funding stream.

The three alternatives for moving a SIB forward that are presented below vary in their level of ambition, complexity, and capacity for service model and systems change.

These alternatives differ primarily in the time taken to consult with stakeholders and bring people to the table to redesign existing service provision systems and mechanisms.

Figure G

**3 Options for SIB Development**

| Level of Innovation | Low | Medium | High |
|---|---|---|---|
| Use a Social Impact Bond to... | Fund a well-defined intervention involving a small number of agencies and ministries | Design an innovative service model that combines multiple best practices with input from multiple agencies and ministries | Lead an intensive systems transformation exercise, engaging numerous stakeholders to redefine how services are delivered |
| Time to commission | 10-12 months | 12-18 months | 18-24 months |
| Purpose of the Social Impact Bond | Demonstrate an innovative funding tool for proven services | Implement an innovative and comprehensive service model that builds on existing best practices | Catalyze broad change in how individuals with severe addiction and mental illness are supported |

## RECOMMENDATIONS

Interviews and research conducted in support of the report exposed a poorly optimized system for providing supportive housing services to the SAMI population. While best practices exist, and a first rate intervention in the form of Housing First carries the promise of strong health outcomes for this population, these have not yet had a dramatic impact on front line service delivery. In our report we have outlined a SIB that would rely on strong inter-ministerial and inter-agency partnerships to deliver a moderately adapted ACT model.

This SIB would fall into category 2 outlined above, and would enable government to de-risk an investment into new service delivery, performance management, and outcome measurement tools that could ultimately shape how existing service delivery systems function. The Social Impact Bond would be a contained lab where adaptations to existing models could be tested and proven while new data on how to best serve the SAMI population could be collected and analyzed.

There is an opportunity to simultaneously expand the scale and quality of supports provided to the SAMI population, increase the collective knowledge around how to best serve these individuals, model real changes to the existing poorly optimized service landscape, and save the public money over the long term. We hope this report will catalyze a collective effort to deploy this innovative social financing tool, capitalizing on the opportunity for real and sustained positive social impact.

# Appendix A: Implementation Timeline
(Approximation)

| Goal | Activities | Outputs | Timeline |
|---|---|---|---|
| Establish SIB Feasibility (Phase 1a) | Conduct interviews with service providers, government and service agencies<br>Aggregate research on SIBs, service provision gaps, and best practices in support models<br>Solicit provincial support for commissioning a SIB<br>Develop basic financial cases for different service provision models<br>Outline study design options including outcome metrics | Interim report , Final comprehensive feasibility study | 4-6 Months |
| Structure the design and implementation phase (Phase 1b) | Assemble an advisory committee with representatives from key agencies, ministries and governments<br>Develop a design and collaboration process for Phase 2<br>Secure MOU's for organizations participating in the design phase<br>Secure commissioner support within a provincial ministry<br>Recruit general partner investor(s) to lead the design and implementation phase | Structured advisory committee including representatives from multiple stakeholder groups<br>Design framework for intervention and study design<br>MOU's between significant parties<br>Commitment from general partner to lead the design phase | 2-6 Months |

| | | | |
|---|---|---|---|
| Design the intervention program and structure a SIB (Phase 2) | Carry out collaborative design process for intervention model w/ stakeholder groups (service providers, general partners (intermediary org), eventual program participants, and health professionals) | Defined service model, operational and governance structures, and SIB contracting structure | 8-16 Months |
| | Plan operations and performance management functions within intermediary. Determine model for contracting support services | | |
| | Finalize study design, outcome measures, and external evaluators in a contract between government and intermediary organization | | |
| Implement a housing first SIB (Phase 3) | Sign individual contracts between commissioner, investment intermediary, external evaluator and sub contracted providers | SIB is funded and operational | 2-6 Months |
| | Complete funding of intermediary | | |
| | Hire necessary HR capacity within intermediary to carry out performance management role. Setup operations | | |

# Appendix B: Do service use reductions lead to cashable savings?

As Social Impact Bonds have gained traction as a funding mechanism, there has been some debate amongst practitioners about whether governments receive cashable savings from which to disburse repayment. This debate hinges on whether preventative programs only free up capacity in existing services (not leading to any reduction in services offered), or if they lead to actual reductions in the costs of providing a service over the long run.

Before entering a discussion of this issue, it is important to highlight the difference between fixed costs, variable costs, average costs and marginal costs. Given the context in which we are recommending a SIB be deployed, this discussion is primarily focused on healthcare.

Fixed costs are all of the costs incurred to establish a hospital (in this case) available to the public for use. These include facilities, equipment, a complement of staff working regular hours, and administration. Fixed costs in the case of healthcare are incurred in a stepped manner as utilization thresholds are crossed. The nature of fixed costs in healthcare are such that a large proportion are not only fixed according to utilization thresholds, but also sunk, making it challenging to scale back capacity once it has been added.

Variable costs are those costs which can go up in the short run as a response to increased demand. These costs would include overtime paid, medications and other consumables. In healthcare, these costs tend to be small relative to the massive fixed costs associated with provision.[32] In line with this, short term fluctuations in demand for healthcare services have not been shown to significantly impact the costs of providing care.[33]

In evaluating the cost effectiveness of preventative programming, it is important to differentiate between average costs, and marginal costs. Average costs are calculated as all of the costs of provision (fixed and variable costs) divided by the quantity of output. The marginal cost is the cost of increasing the quantity of output by one unit (a patient or inpatient day being the most common units of measurement in healthcare). Marginal costs in healthcare, as variable costs, are generally minimal relative to average costs.

In evaluating preventative healthcare interventions for cost effectiveness, it is important to differentiate between the type of cost savings that will accrue. Studies that cite the average cost of a treatment

32. Roberts RR et al., "Distribution of Variable vs Fixed Costs of Hospital Care," JAMA 281, no. 7 (February 17, 1999): 644–649, doi:10.1001/jama.281.7.644.

33. Laurence C. Baker et al., "Within-Year Variation in Hospital Utilization and Its Implications for Hospital Costs," Journal of Health Economics 23, no. 1 (January 2004): 191–211, doi:10.1016/j.jhealeco.2003.09.005.

as the amount that will be saved if prevention eliminates the need for treatment, are incorrectly representing the type of cost that is being avoided through prevention.[34] Similarly, if a study cites the marginal cost as the amount that will be saved per individual through the provision of a preventative program, the true impact is being underreported. Debate on the economic benefits of preventative programming tends to hinge on this distinction. The reality is a more complex cost reduction than can be captured within either category. Given that marginal costs can increase and decrease depending on the utilization rates of fixed assets, the context in which costs are being evaluated will impact how costs are reduced and those reductions measured.

Based on the body of research on this issue within healthcare economics, there will not likely be large, immediately cashable savings through a cohort of 200-500 individuals reducing their inappropriate health care use. However, given the evidence of burden that concurrent addiction and mental health incur (rivaling major diseases such as cancer[35]) there are clearly long run resource allocation implications stemming from preventative interventions.

Evidence suggests that appropriate care for individuals with substance abuse disorders and mental illness can lead to significant reductions in acute care use, enabling a transfer of resources from acute care to non-acute care.[36] The reduction in inappropriate service use in aggregate is significant, and the cost offset from appropriate or preventative service use should be viewed as a real driver of reductions in long term healthcare cost functions.[37] [38] [39] Insofar as preventative programming for mental illness reduces long term demand, stepped fixed cost increases over the long run can be reduced and/or delayed.

34. Stephen Morris, Nancy Devlin, and David Parkin, Economic Analysis in Health Care (John Wiley & Sons, 2007).

35. Sujitha Ratnasingham et al., "The Burden of Mental Illness and Addiction in Ontario.," Le Fardeau de La Maladie Mentale et de La Toxicomanie En Ontario. 58, no. 9 (September 2013): 529–537.

36. Thomas A. Kirk et al., "A Case and Care Management Program to Reduce Use of Acute Care by Clients With Substance Use Disorders," Psychiatric Services 64, no. 5 (2013): 491–493.

37. Harold D. Holder, "Cost Benefits of Substance Abuse Treatment: An Overview of Results from Alcohol and Drug Abuse," The Journal of Mental Health Policy and Economics 1, no. 1 (March 1998): 23–29.

38. John Hunsley, "Cost Effectiveness and Medical Cost-Offset Considerations in Psychological Service Provision.," Canadian Psychology/Psychologie Canadienne 44, no. 1 (2003): 61.

39. Sujaya Parthasarathy et al., "Association of Outpatient Alcohol and Drug Treatment with Health Care Utilization and Cost: Revisiting the Offset Hypothesis," Journal of Studies on Alcohol and Drugs 62, no. 1 (January 1, 2001): 89.

# About the Authors

### ECOTRUST CANADA

Ecotrust Canada is a registered federal charity whose mission is to redesign economies to meet the needs of people in place. Our goal is to provide evidence that economic systems which balance financial, environmental and social interests and conditions are not only possible but preferable because they generate increased wellbeing and create a more resilient economy over time.

### RADIUS

RADIUS (RADical Ideas, Useful to Society) is a social innovation lab and venture incubator based at the Beedie School of Business, formed to help SFU and BC step forward as leaders in building the New Economy. Our programs are grounded in a shared approach: the 'RADIUS Way' demands Humility through human-centred solution design; Rigour through lean approaches to model testing and development; and maximizing Impact above all else in identifying problems, solution and business models to work on.

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The Real Estate Foundation of BC is a philanthropic organization with a mission to transform land use attitudes and practices through innovation, stewardship, and learning. The Foundation's grants program supports non-profit organizations working on progressive projects that address environmental and urban issues. Since 1988 the Foundation has approved more than $65 million in grants to create positive change for BC communities.

### CENTRAL CITY FOUNDATION

Central City Foundation has been bringing neighbours together to build hope in Vancouver's inner city since 1907. By building housing and other capital projects, investing in social enterprises that create jobs and opportunities as well as funding hundreds of non-profit organizations, Central City Foundation has provided help and hope to the most vulnerable people in our inner city community for 106 years.

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