CRIME PREVENTION OTTAWA

PRÉVENTION DU CRIME OTTAWA

A Cost-Benefit Analysis of the Time for Change Program

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Executive Summary:

Crime Prevention Ottawa (CPO) has been managing the Ottawa Street Violence and Gang Strategy since 2013. The strategy identified four pillars of work: healthy neighbourhood cohesion; early prevention; intervention; and enforcement and suppression. A range of programs and initiatives have come together within the four pillars with the overall strategy acting as a bridge between programming.

In 2015 with funding from a Mayor's initiative, CPO was able to fund a gang intervention ("exit") program to assist individuals involved in a gang lifestyle to change their behaviour. The program, called Time for Change (T4C), is CPO's largest investment in the Strategy. Please note that not all programs in the Strategy are funded by CPO.

To ensure the validity of this investment, CPO engaged a research analyst with an accounting background to review the program. The principal aim of this analysis was to compare the monetary benefits of the program to the cost of the program. The financial analysis focused only on the cost-benefit to the tax payer in savings to the criminal justice system (CJS). The data and calculations were of a snapshot in time, looking at participants who were active in T4C from April 1, 2018 to March 31, 2019. The results must be read with caution. Highlights of the results are:

- Based on the research, T4C participants received 55% less new charges overall than would be expected without intervention – the reduction for violent offences was 61%
- Savings to the CJS for every $1 spent was $3.37
- Average annual cost per participant was $6,921
- Of the 5 participants who did receive new charges, only 1 was a violent crime, and all 5 participants remained in the programming seeking to change their lifestyle

It is important to keep in mind that the benefits calculated were only in savings to the criminal justice system. The benefits in reduced crime and violence extend far beyond cost savings to the criminal justice system. For example, the benefits to families and neighbourhoods were not calculated financially.

This report also identifies the shorter-term indicators of T4C's effectiveness which include providing necessary support to participants to reduce their criminogenic risks and meeting the complex needs of clients who are newcomers to Canada through specialized caseworkers, and community outreach. T4C further extends its investments and enhances its effectiveness by inviting previous T4C participants to help educate the community and influence youth.

An individual success story from the year is of one participant who, after failing to complete supervision in the past 5 years, was finally successful after joining T4C. A suggestion of longer-term success can be found in three participants who were in T4C for longer than average (2 years). Only one of these three received new charges in the two years, and the offence was not violent.

A barrier to success that was identified to help explain the 5 new charges among participants is the need of the participant to make the necessary shifts, some of which include a change in their attitude and outlook regarding criminality. Reporting on related indicators such as increased recognition of impact of behaviours or improved social functioning and positive social behaviours was not available for review.

Some of the observational data suggests that T4C may not reduce recidivism in the long run but that it may reduce violence and involvement in gangs. T4C is not tracking the stability of the connections to support over time and is limited to information about the participant only while they were active in T4C. T4C does not consistently measure or report on its effectiveness in reducing risk. Provisions for enhanced data collection should be incorporated into future T4C funding contracts.

Introduction

Objective

The objective of this analysis is to determine whether the monetary benefits of the Time for Change (T4C) program outweigh the costs, and to determine the monetary value achieved for the investment.

Scope

This analysis looked at the costs and benefits of the T4C program at a snapshot in time: April 1, 2018 to March 31, 2019. It reflects the total costs of T4C for the 46 participants who were active during the year, and 146 referrals that were made that year, and looked at the program impact on recidivism of 38 participants with significant participation (short-term and long-term duration). The analysis considered a recidivism event to be any new charge made against the participant while they were active in T4C. Participants who were active during the year may have started before or during the year and may have left the program during the year or after the year. The average length of stay for short-term participants was 4 months; the average length of stay for long-term participants was 12 months. The benefits considered in this cost-benefit analysis are defined as monetary costs saved by the criminal justice system.

Methodology

The benefit-cost ratio will convey the monetary cost savings to the criminal justice system for every dollar invested in the program and is calculated as cost savings to the justice system divided by the annual costs of T4C. A more detailed description of the calculations is included in the body of this report.

Weighted annual program costs were calculated using estimates of time spent by the participant in active use of the program (time with a caseworker). Crime costs were estimated using a variety of sources including published reports, government publications, and rough calculations where data was not available. Where needed, costs were adjusted for inflation using the bank of Canada's inflation calculator. The data used in this analysis erred on the side of conservatism to ensure costs were not overstated.

Program benefits were assessed using multiple lines of analysis which included interviews, surveys, and previous studies on relevant topics such as recidivism, costs of crime, and risk-need-responsivity. In addition, the assessment considered observational data on recidivism and program effectiveness, as well as analysis of aggregate information on participants who were active in the program during the year.

To calculate the cost savings to the justice system, the difference between actual and expected recidivism was assessed for participants of T4C to get the number of crimes avoided through participation in the program. The number of

crimes was divided among likely types of re-offences, and then multiplied by the cost of that type of re-offence.

Limitations

Limitations on data availability impact the values used in this analysis including the weighted cost per participant, the expected recidivism rate of the participants, the actual recidivism rate, and the cost of an incident of crime. Because of this, the estimates outlined in this analysis should be interpreted with caution. A detailed listing of limitations and assumptions can be found in Appendix A: Limitations, Assumptions, and Bias

Costs of The Time for Change Program:

Time for Change (T4C) offers specialized services to adults, young adults and their families who are impacted by gang involvement. Crime Prevention Ottawa invested in T4C to reduce recidivism and violence in Ottawa. T4C provides services to hard-to-serve, complex individuals with serious criminal involvement by connecting with clients at strategic times in their lives – events that open the door to change such as being taken into, or leaving custody, expecting a child, recovering from a shooting, or immediately after a close friend or family member is shot. T4C is funded by Crime Prevention Ottawa, with the Ottawa Police serving as an important referral partner.

The T4C program is a partnership between the John Howard Society of Ottawa and Ottawa Community Immigrant Services Organization (OCISO). The majority (79% in 2018/19) of the cost of the program is for services provided by the John Howard Society of Ottawa, which employs two caseworkers and a project lead. The organization is responsible for assessing client needs, connecting them to supports that have been proven[1] to help reduce criminogenic risks, build protective factors, as well as outreach to potential future participants (referrals).

The other portion of costs of the program (21% in 2018/19) are for services provided by OCISO, which is contracted to ensure clients' cultural needs are addressed, and that they can access the culturally appropriate services they need to continue their exit strategy. OCISO employs one caseworker for T4C, responsible for providing support to clients with specific needs relating to culture or immigration status and advising other T4C caseworkers on cultural and immigration matters. It also provides community outreach, a mentorship program, and contributes to referrals through the Multicultural Inmate Liaison Officer at the Ottawa Carleton Detention Centre.

[1] Bonta, Andrews (2007); Wooditch, Tang, Taxman (2014); Thompson, Forrester, Stewart (2015); John Howard Society of Ontario (2016); Ministry of the Solicitor General (2016).

Program Costs

Program costs were calculated using the total amount paid by Crime Prevention Ottawa to the John Howard Society and to OCISO for the year ended March 31, 2019 according to the contracts between Crime Prevention Ottawa and each organization. All costs including overhead were considered in this analysis. The total cost of the program, and cost per participant in 2019 were as follows:

Table 1: Annual Program Costs

Annual Program Costs	
Total Costs of the Program	$318,362
Average Cost per Participant	$6,921
Average Cost Including Referrals	$1,851

Participants of Time for Change:

Participants of T4C to date tend to be adult males who have had charges fitting the profile of someone involved in street level violence such as firearms; drugs; human trafficking; assaults with weapon; or robbery. The data used in this analysis therefore assumes participants to be adult, violent offenders at high risk of re-offending. The cost and outcomes of T4C are compared to those expected without any other source of support.

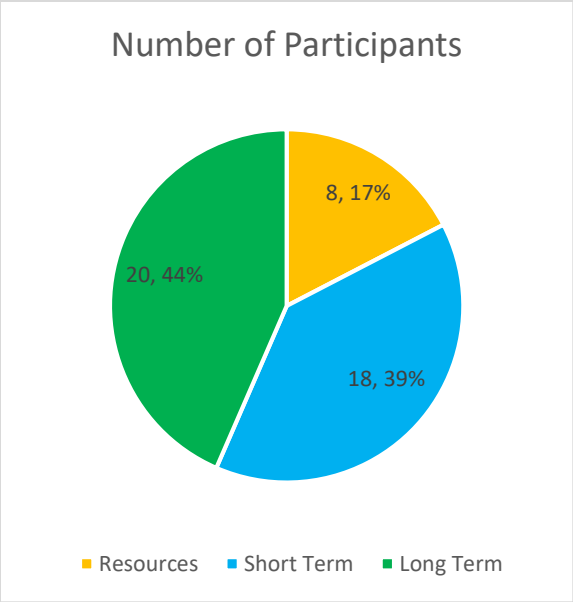
Costs per Participant

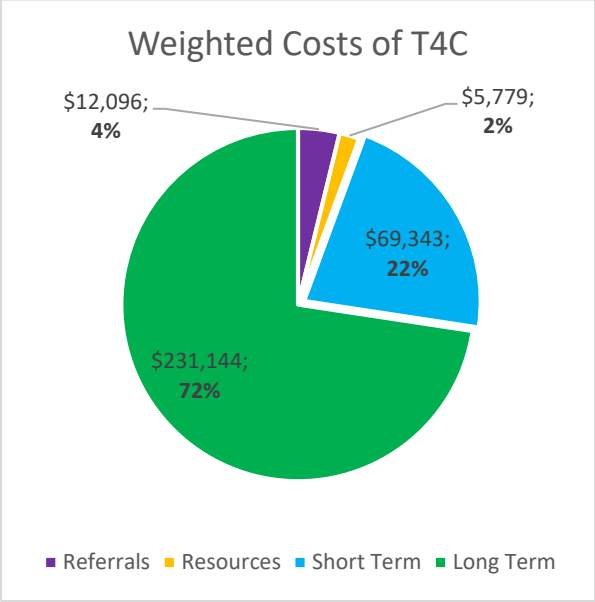
T4C reaches participants through varying levels of engagement. To account for the difference in cost resulting from the difference in time spent by T4C staff, costs per participant were calculated for four categories of engagement with the program: Long-term participants who are active in T4C for 6 months or more; Short-term participants who are active in T4C for less than 6 months; resources who are participants who do not work with a caseworker, but are briefly in T4C to get connected to support; and referrals who are individuals with whom T4C has reached out and monitors, but who are not yet able or ready to participate in the program. Further explanation of each category of participant can be found in Appendix B: Participant Categories. The total cost of the program was allocated proportionately to each of these categories based on the number of participants in each category during the year, and the average time in T4C, or estimated number of visits for that category. The following table shows the portion of the total costs of the program that were allocated to each category, as well as the cost per participant for each category.

Table 2: Annual Cost per Participant[2]

Participant Category	Number of Participants	Weighted Annual Cost of T4C	% of Total	Weighted Annual Costs per Participant
Referrals	126	$12,096	3.80%	$96
Resources	8	$5,779	1.82%	$722
Short Term	18	$69,343	21.78%	$3,852
Long Term	20	$231,144	72.60%	$11,557
Total Short Term and Long Term	38	$300,487	94.39%	$7,908
Total Costs of T4C	46	$318,362	100.00%	$6,921

Diagram 1: Breakdown of Participants and Costs by Category





The lower costs associated with referrals and resources would be expected to correspond with lower benefits. A referral who has not yet actively taken part in T4C would not have had the chance to benefit from it. Similarly, the active participant who is with T4C only briefly to be connected to some resources would not benefit from continued interaction with a caseworker. The costs allocated to Short-term and Long-term participation are therefore the most

[2] Includes all costs based on the total annual amount paid to John Howard Society and OCISO by Crime Prevention Ottawa. Because the level of effort is not tracked for each participant or participant category, the weighted costs are calculated using rough estimates. See Appendix B: Participant Categories for more information.

relevant for comparison to the benefits of the program. These costs comprise 94.39% of the total program costs.

The cost per participant in this analysis is an allocation of the total annual costs to the number of participants who were active in the program that year. It is not the incremental cost to the program of having one more participant.

Program Benefits

T4C is a program developed for individuals and their families with the goals of providing support to reduce needs and risks and develop more protective factors, ultimately leading them away from the criminogenic lifestyle. To achieve these goals, T4C aims to:

- Continually assess and address participants' needs;
- Change attitudes and thinking to increase participants' ability to choose non-violent resolutions, develop critical life skills, and foster pro social behaviour;
- Connect participants to supports known to reduce criminogenic risk factors that lead to recidivism and violence;
- Increase awareness of T4C to relevant individuals so they can access it when they are ready;
- Provide quality support to participants in terms of cultural and immigration knowledge;
- Strengthen community connections.

Crime Prevention Ottawa invested in T4C to reduce violence and recidivism in Ottawa.

When a T4C participant succeeds in exiting the criminogenic lifestyle, the value to residents and neighborhoods would extend far beyond the one year measured and reported in this analysis, and far beyond the cost savings to the criminal justice system. Reducing violence and recidivism in Ottawa improves the quality of life of an individual or neighbourhood that would otherwise have been impaired by a violent crime, or by crime in general. The benefits of T4C would therefore include (among others) the following social and economic values:

- By-standers, neighbours, friends, and family feeling safe;
- Physical and mental health of a bystander that might otherwise have been the unintended target of, or witness to a murder, assault, or other violence;
- Contributions to the local economy and tax revenue gained from improvements to a participant's income and housing;
- Reduced burden on the healthcare system;
- Overall reduction in crime in a neighborhood could contribute to sustained or improved property values in that neighborhood;

- Deterring a participant from a criminogenic lifestyle could also deter future generations of would-be offenders, resulting in continued social and economic gains.

The values of the benefits mentioned above are not included in the scope of this analysis. Instead, the analysis focused on the impact of T4C on reducing recidivism, and the resulting cost savings to the criminal justice system. The analysis also examined the effectiveness of two key T4C activities that are intended to contribute to the goal of reduced recidivism by reducing participants' criminogenic risks. T4C connects participants to supports such as housing and employment because these supports are expected to lead participants away from a criminogenic lifestyle by addressing their needs. T4C hosts community engagement forums aimed at educating support providers about cultural complexities relevant to participants because it is expected to help retain complex clients and strengthen the quality of the support they receive. Because the use of recidivism rates as an indicator of program effectiveness relies on estimates, and assumptions, assessing these two key activities supplements this analysis with insight into T4C's impact on participants' risk levels, and the effectiveness of those providing support.

The T4C activities and the program's impact on recidivism were measured as follows:

1. By assessing the success rate in connecting participants to support in areas that are known to be factors in reducing recidivism and violence (success factors), and assessing the extent to which T4C was instrumental in this success;
2. By assessing the degree to which outreach and engagement forums were successful in providing relevant and helpful information to build the community's ability to support complex needs;
3. By determining whether short-term and long-term participants experienced a rate of recidivism lower than that expected without intervention, and whether re-offences were less violent than they would have been without intervention.

The benefit of reduced recidivism was assessed and quantified only for the short-term and long-term participants because of limitations in information about the participants after they leave T4C. Connection to support was assessed for short-term, long-term, as well as resources participants. Results of the assessments can be found in the following sections.

Connection to Targeted Support

T4C connects participants to support intended to help reduce their criminogenic risk factors. The areas of support come from the dynamic risk

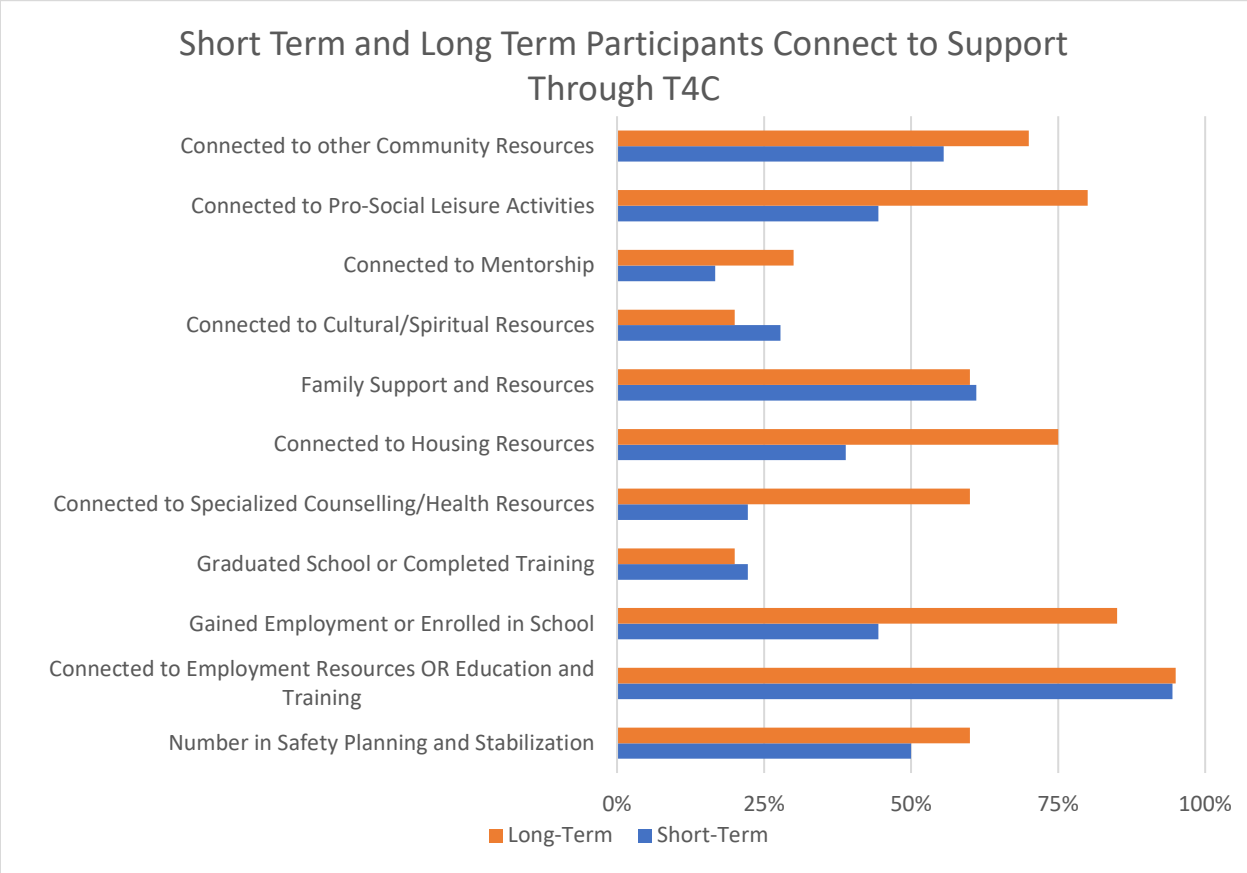
factors identified in the Risk, Need, Responsivity model[3]. Every participant was connected to at least one support while in the program. 95% of long-term, 89% of short-term, and 12.5% of resources participants were connected to three or more supports in 2018/19.

Table 3: Connections to Success Factors

Category/Length of Stay	Number of Participants	Not Connected to a Success Factor	Connected to Only One Success Factor	Connected to 3 or More Success Factors	
Resources	8	0	7	1	13%
Short-term	18	0	2	16	89%
Long-term	20	0	1	19	95%

The following chart shows the types of support participants were connect to.

Diagram 2: Types of Support



[3] Bonta, Andrews (2007).

The two factors that the participants were connected to the most were "employment resources or education and training" and "gained employment or enrolled in school". Research[4] has shown that offenders who were not employed with a stable job were 2.5 times more likely to return to custody with a new offence than offenders who had stable employment. In its 2016 report, The John Howard Society of Ontario[5] indicated that unemployment is one of the top 3 predictors of criminal recidivism, and that recidivism is reduced by 43% when individuals are linked to housing, mentoring, employment, and therapy upon release.

The factor with the lowest number of participants was "graduated school or completed training" at 22% and 20% for Short-term and Long-term clients, followed by "connected to mentorship" with 17% and 30% of Short-term and Long-term.

The benefits achieved through the participants' connections to success factors would be seen through a reduction in recidivism and violence, which is discussed later in this report. The costs associated with connecting the participants to success factors were included in the cost of the program per participant and are compared in this analysis to the benefit of cost savings to the criminal justice system.

Impact of T4C on Connection to Success Factors:

Participants who were active in T4C at the time of this report (October 2019) were surveyed to determine their opinion of the program's effectiveness in meeting their needs to reduce their recidivism and violence.

Caseworkers were also surveyed for their observations of these participants, and a federal parole officer was interviewed regarding T4C participants in general. The results of both surveys and the interview were that the program has a strong positive impact on providing support. Some observed that it may not reduce recidivism overall, but that it may reduce violence, and gang related offences. 91% of the participants felt their work with their caseworker helped to keep them out of custody. Caseworkers and participants feel that T4C played a major role in connections to employment and education, and in finding new ways to solve problems. Caseworkers also observed that the seriousness of the client's involvement with drugs was reduced after joining T4C for 80% of short-term clients and 58.3% of long-term clients.

It is important to note that the supports are not independent of each other. For example, connection to employment can lead to housing, and connection to

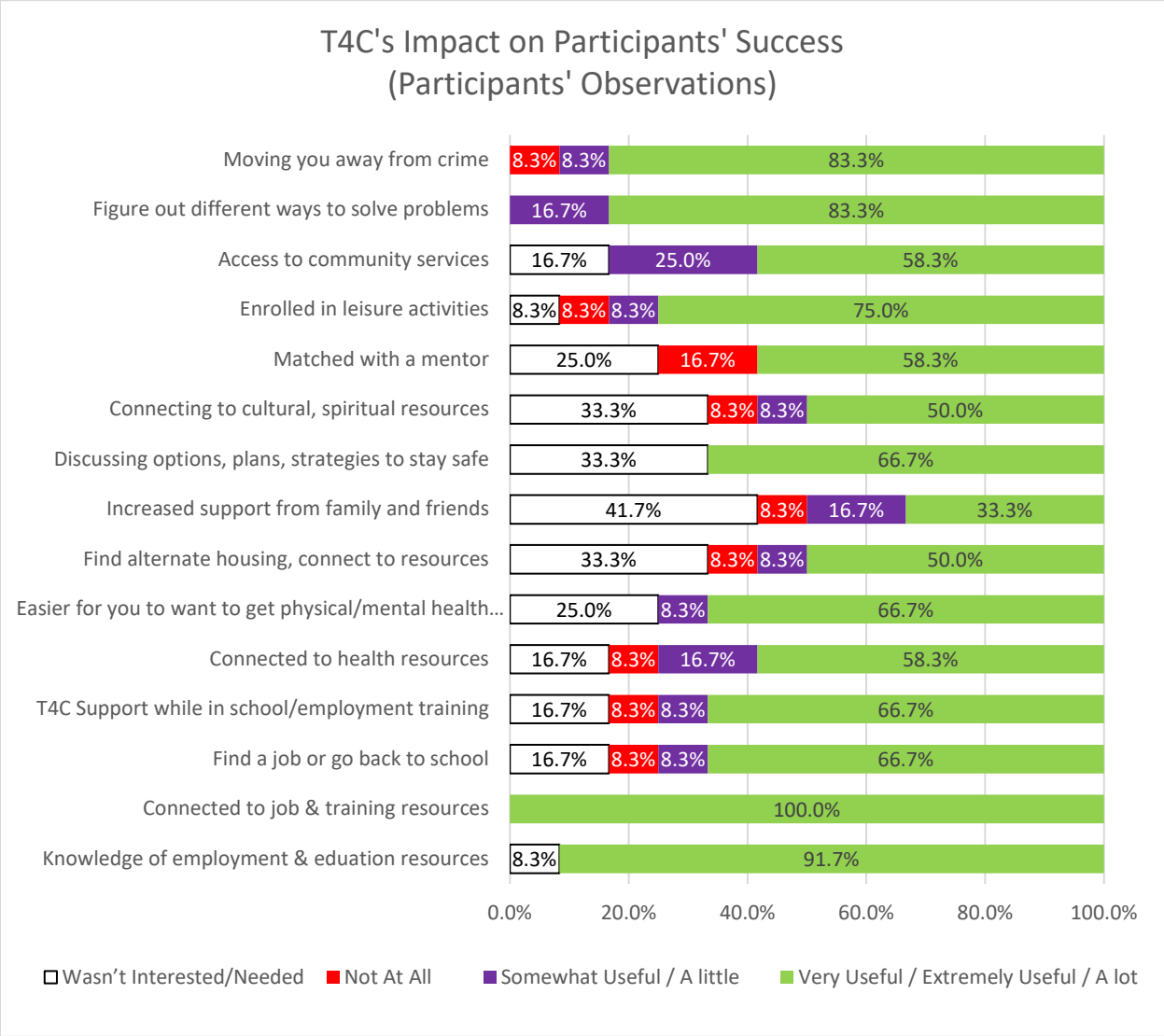
[4] Stewart, Wardrop, Wilton, Thompson, Derkzen, and Motiuk (2017) references a study by Nolan and Power (2014)

[5] John Howard Society Ontario 2016 Report: Complex Web of Reintegration

family support could lead to cultural and spiritual support. Therefore, T4C may play a large role in connecting the participant to one initiating support, and a smaller role in connecting the participant to a subsequent support.

Results of the two surveys follow:

Diagram 3: Participants' Observations of T4C



Following are some comments from the participants:

"They help and make sure you are on the right path and motivate you to do better things in life.";

"Since incarceration and upon release, coming home to no home, few family and friends, T4C has played a big part with emotional support. They have

helped with the few resources available to them, ease my way back into society as best they could.";

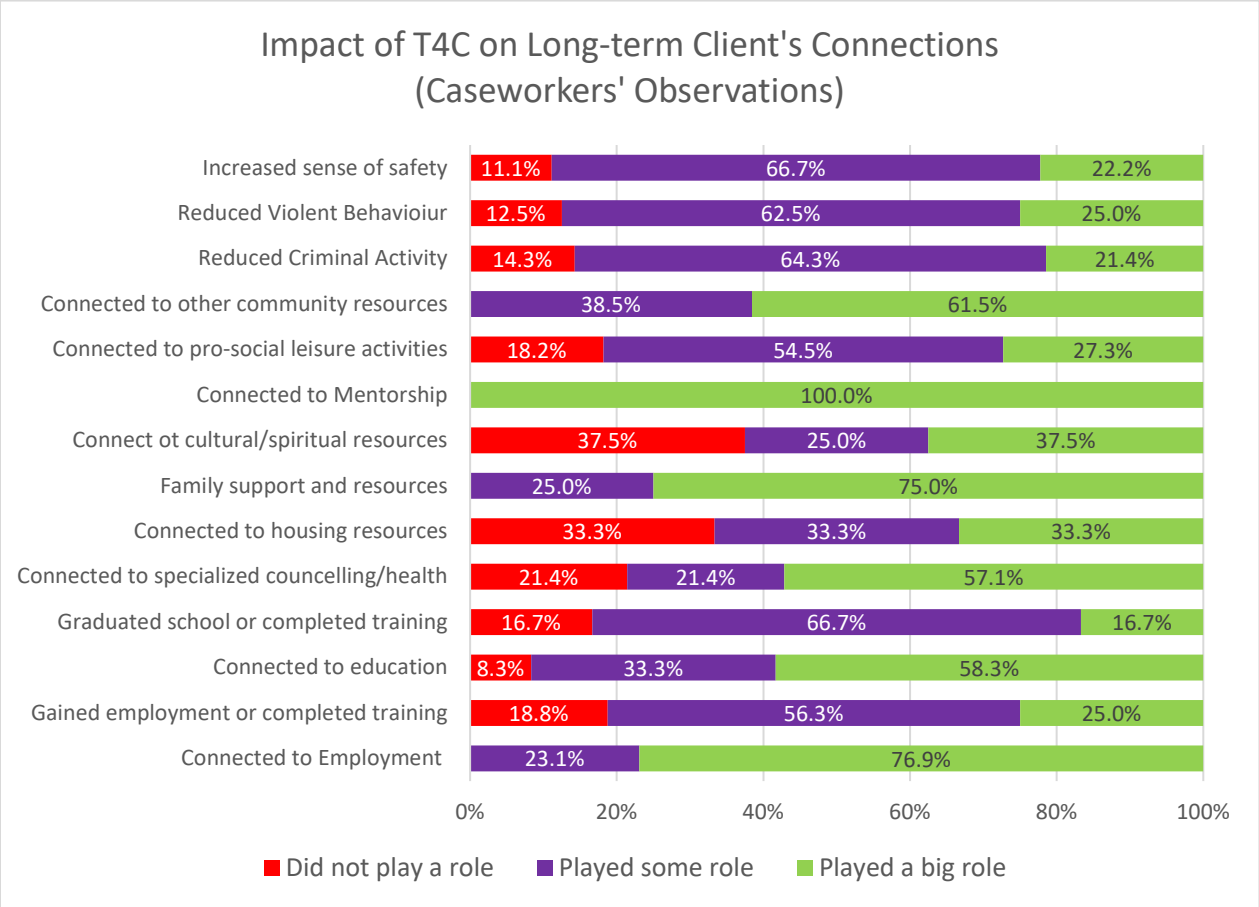
"Every time I ask about something, the caseworker does her research and gets back to me right away. I am done with parole and I still see her to talk about life problems. The program is amazing.";

"My caseworker has been my fuel to keep me motivated. She is a stranger who has my best interest. I'm still trying to figure out why.";

"Having a caseworker has helped me not only in staying out of jail, but also to give me advice/suggestions on healthy relationships.";

"I always heard about the John Howard Society but never took initiative into getting connected with different supports in the community."

Diagram 4: Caseworkers' Observations of T4C



Following are some comments from the caseworkers:

"After joining T4C, the client was able to successfully remove all gang tattoos. He indicates that he's no longer gang involved. Client also secured housing and receives financial support.";

"After joining the program, the client was able to achieve and maintain sobriety. Significant improvements demonstrated in employability skills, which resulted in the client securing permanent employment.";

"T4C was able to connect and build a relationship with the client's family in an effort to strengthen support network. Strong family support is a huge predictive factor for the client.";

"Openly identifying and challenging cognitive distortions. Willingly explores impacts of trauma and addresses negative beliefs. Increased understanding of impact on views of self/world/others/interactions. Renews commitment to maintain sobriety. Gives back by volunteering. Sets long-term goals and takes active steps towards achievement.";

"Willing to have views on violence, masculinity, vision of success challenged. Identifies risks to street-level violence as opposed to mostly gains/benefits. Appears to have increased understanding of the impact that his thoughts have on his actions."

Capacity to Serve Complex Clients

OCISO hosts two community forums each year to engage the community to ensure supporting organizations receive the training they need to provide quality support to T4C participants. The topics of each forum were chosen in consultation with the community organizations to ensure they were relevant and directed to the training needs of the organizations.

To assess whether the community forums were successful, attendees had the opportunity to complete an evaluation form after each forum. For both the Employment Forum and the Family Dynamics Forum, the responses to the evaluation forms demonstrate that the majority of attendees who completed an evaluation found the forums to be applicable to their job and presented by a knowledgeable instructor. They also indicated that they would attend future forums and would recommend the workshop to other service providers.

Diagram 5: Effectiveness of Family Dynamics Forum

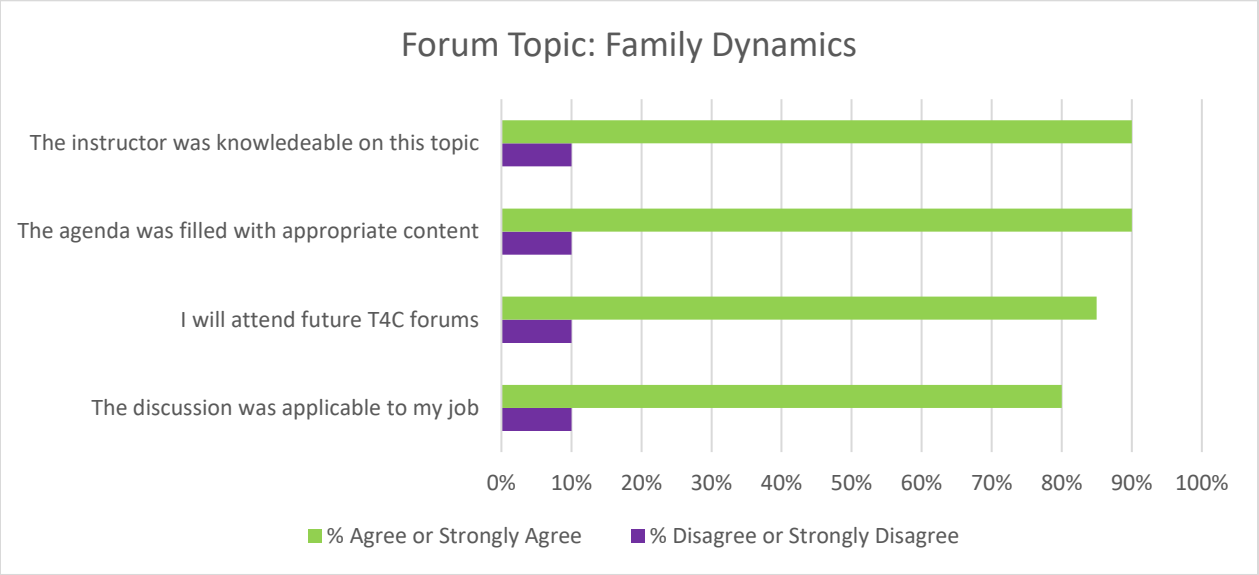
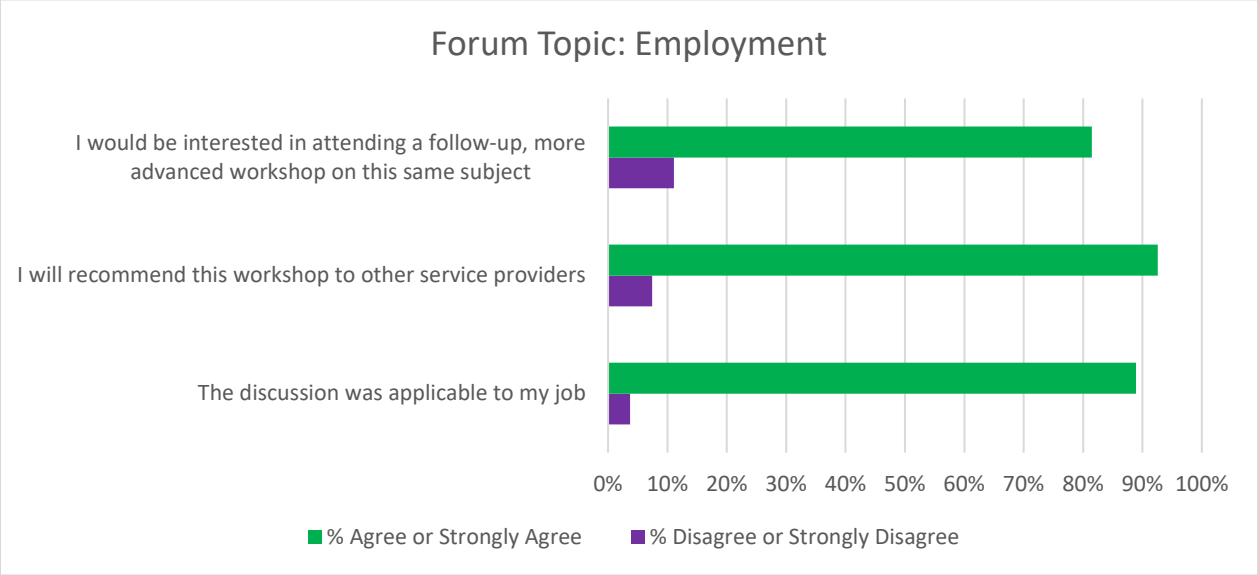


Diagram 6: Effectiveness of Employment Forum



The benefits achieved through community education would be seen in the participant's observation of the quality of support provided by T4C. These observations were presented previously. The costs associated with community engagement[6] were included in the cost of the program per participant and are

[6] At the time of this report, the level of effort per key activity was not tracked. Therefore, the specific costs of community engagement were not available.

compared in this analysis to the benefit of cost savings to the criminal justice system[7].

The impact of the investment in T4C participants is extended further by inviting former successful participants back to be a volunteer speaker at the community forums. This real-life example of success is very impactful and well-received according to the comments of the forum evaluation. Unprompted, 74% of those who completed an evaluation form for the Employment Discussion Forum commented very positively about the former participant presenters. This is one example of ongoing value resulting from the initial investment in the participant.

Reduction in Recidivism and Violence

To assess T4C's success in reducing recidivism and violence, the percentage of participants who re-offended while in the program during the year was compared to that expected based on published recidivism rates. The published rates vary depending on several factors about the offender, such as their level of criminogenic risk at the time of release, whether they were in federal or provincial custody, and the type of offence they committed. The main source of recidivism relied on for this analysis was the 2014/15 provincial rate of 64%[8] published by the Ministry of the Solicitor General, which describes recidivism in Ontario as

> "… a return to provincial correctional supervision on a new conviction within two years of completing probation, parole or conditional sentence; or a provincial jail sentence of six months or more."[9]

Due to limitations in recidivism data among participants, the rate was adjusted to reflect the approximate period over which recidivism information was known for the participants: six months and twelve months. These rates are detailed below.

The recidivism rate of the participants of T4C was assessed separately for a violent offence[10], and for any re-offence[11] in order to assess the program's

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[7] The assessment of benefits to the criminal justice system are discussed later in this report. Detailed calculations of cost savings can be found in Appendix C.

[8] Ministry of the Solicitor General (2016). Rates of recidivism (re-conviction) in Ontario. Note that the validity of using recidivism rate as an indicator of program effectiveness is impacted by the variances among recidivism rates for different populations. The provincial rate for high risk offenders was used in this analysis as the expected rate for T4C participants because it closely aligned with observational data by those who know and understand the program, and who refer clients to the program.

[9] Ministry of the Solicitor General (2016). Rates of recidivism (re-conviction) in Ontario

[10] For this analysis, a violent offence includes non-sexual and non-spousal crimes against a person except criminal harassment. Where detailed data was not available, the analysis used the higher level data that may have included other violent crimes. Where data was available, the analysis included assault with a weapon/causing bodily harm, robbery, and homicide which included manslaughter, murder 1 and murder 2.

[11] In addition to the violent crimes listed above, in this analysis "any re-offence" included drug possession and trafficking, and property crimes or non-violent crimes. Due to limitations in data, a re-offence among participants

success in reducing violence. The 2019 Federal rate of 6.7% published by Correctional Services Canada was used to compare violent re-offences[12]. It defines the recidivism rate of federally sentenced offenders as

> "reconvictions that resulted in a return to federal custody or reconvictions that resulted in provincial or territorial sanctions."[13]

Because this rate does not reflect the specific population of T4C participants and is very low compared to that observed by stakeholders, the rate was not adjusted for a shorter time period for this analysis. Refer to the limitations section of this report for additional cautions in interpreting the recidivism data used in this section.

The following table shows the number of participants who were charged with any offence over 6 months and one year, and indicates whether the offence was violent:

Table 4: Participant Recidivism

Length of Stay	Average Time in T4C	Number of Participants	Re-offended at least Once Since Joining T4C	Re-offended Within 6 Months of Joining T4C	Re-offended After Being in T4C for 6 Months	Violent Offence
Short Term (<6 Months)	4 months	18	2	2	N/A	1
Long Term (>=6 Months)	12 months	20	3	1	2	*None*
Total		38	5	3	2	1

*Re-offences are new charges, not convictions. They do not include a breach.

In its study of prisoners released in 30 states in 2005[14], the US Bureau of Justice Statistics found that of those who recidivated in the first five years, 36.8% were arrested in the first 6 months, and 56.7% within the first year. The expected

is defined as a new charge. The charge may not lead to a conviction. See Appendix A for more information on the impact of this limitation.

[12] The report was used to compare violent re-offence rate among participants to those published. Observational evidence suggests the rate of recidivism with a violent re-offence among participants would be substantially higher. Using this rate therefore provides a conservative estimate of expected violent re-offences, and a minimum number of violent crimes avoided. The report was not used for the general assessment of re-offences because it does not provide the expected rate specifically for offenders involved in gangs and street level violence.

[13] Stewart, Wilton, Baglol, Miller (2019). A Comprehensive Study of Recidivism Rates among Canadian Federal Offenders. Correctional Services Canada.

[14] Durose, Cooper, Snyder (2014). Recidivism of Prisoners Released in 30 States in 2005: Patterns from 2005 to 2010- Update. Bureau of Justice Statistics.

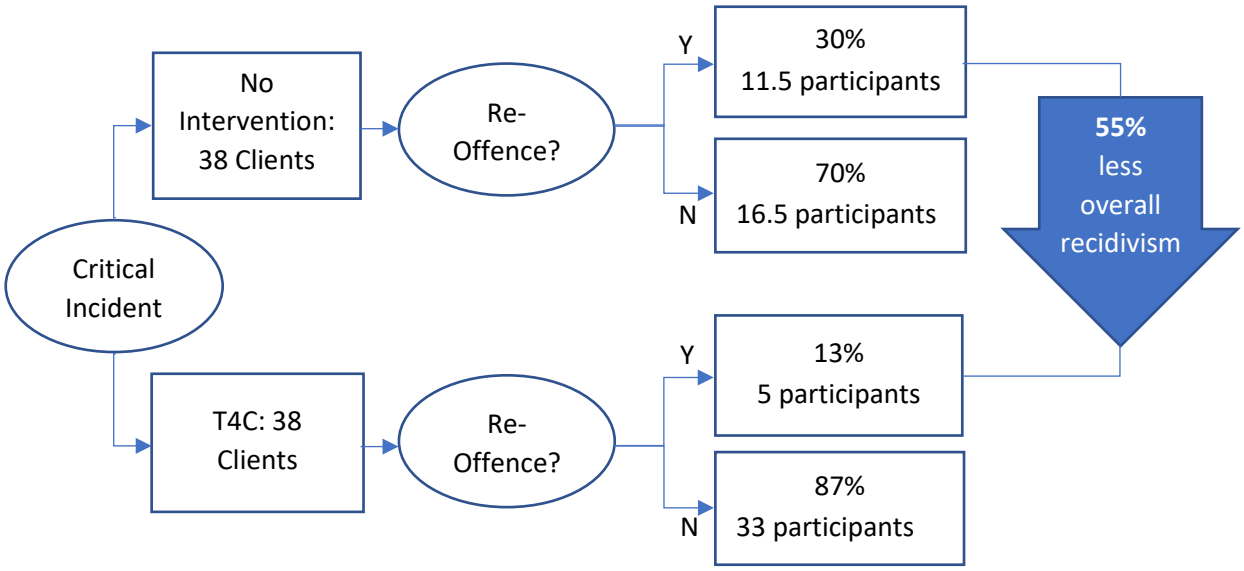
recidivism rate was calculated for T4C by applying these findings[15] to the provincial rate of 64%.

The expected recidivism rate applied to the participants who were in T4C for the short term was estimated to be 23.5% (36.8% of 64%). With 18 participants, the expected recidivism is 4.23.

The expected recidivism rate applied to the participants who were in T4C for the long term was estimated to be 36.2% (56.7% of 64%). With 20 participants, the expected recidivism is 7.24

The following graph shows that compared to the expected 11.5 total re-offences, only 5 participants re-offended, meaning that 6 fewer crimes were committed among T4C participants than would be expected without intervention.

Diagram 7: Impact of T4C On Recidivism

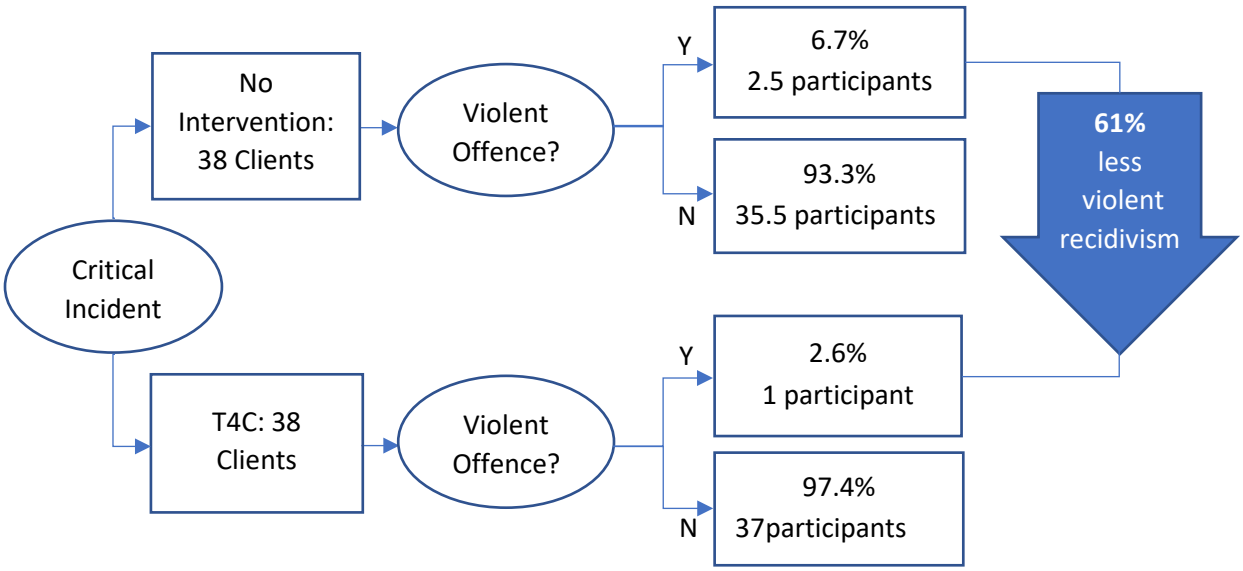


The 5 participants who re-offended while in T4C were connected to support and met with a caseworker to help assess and address their needs. JHS has indicated these participants hadn't yet been successful in making the necessary shifts, some of which include changing their outlook and attitude regarding criminal activity. These participants did not leave T4C after re-offending, demonstrating a continued interest in working to reduce their criminogenic risks.

[15]US recidivism data was applied to a Canadian context for this calculation. Because of differences in the US justice system and demographics etc, the US rates may not be reflective of those that would be observed in Canada.

A separate assessment was made looking only at violent re-offences. The expected recidivism rate for committing a violent re-offence is 6.7%[16]. Observational data suggests that this rate is very conservative for the population of T4C participants. Using this rate, the expected recidivism with a violent crime among 38 participants is 2.5 violent re-offences. However, of the 5 re-offences referenced above, only one was violent. In other words, the participants of T4C committed 1.5 fewer violent crimes than would be expected without intervention. The following graph shows the recidivism rate for violent offences among participants of T4C compared to that expected without intervention.

Diagram 8: Impact of T4C On Recidivism with a Violent Offence



Note that the violent re-offence was committed by a participant who was in the program less than 6 months. None of the 20 participants who were in the program long-term committed a violent re-offence while in the program.

Three participants who were active in T4C during the year, were still in the program after 2 years. Of these three, only one re-offended. The offence was neither violent nor related to street level violence.

Monetary Benefits: Cost Savings to the Justice System

The cost savings to the criminal justice system were calculated by attaching a cost of crime to the 6 crimes avoided over the year by T4C participants. The

[16] Stewart, Wilton, Baglol, Miller (2019). Table 10: Rates of Violent Reoffending by Index Offence. The average of the rates for Non-Indigenous Men that were provided on this chart was calculated, including the following index offences: homicide, robbery, assault, other violent offence, drug. Sexual, property, and other non-violent offences were omitted since they are not reflective of the types of index offences typical of street level violence. i.e., they do not reflect the population of T4C participants.

costs per crime to the criminal justice system were estimated for the three main areas: policing, courts, and corrections. Values for these components were taken from a variety of sources where possible and calculated where needed. Variances among data were considered, and where differences occurred, the most reasonable and/or conservative estimate was used.

A discussion of the values used to calculate the cost of crime can be found in Appendix C: Calculating the Cost of Crime. The results are in the table below:

Table 5: Cost per Incident of Crime

Crime	Cost Per Incident
Property/Non-Violent Offence	$14,941
Drug Offence – Average	$51,867
Other Violent Offence	$306,737
Homicide- Average	$2,766,169

The offences included in the cost estimates were the most likely offences committed by participants based on observational data by stakeholders. Because of the differences in costs for different types of crimes, it was necessary to predict the type of crimes that were avoided as a result of the reduced recidivism among participants. Although there is no way to be sure of the type of re-offence that might have been committed by participants had they re-offended, this analysis used historical data provided in a study as a guide to the likelihood of the type of re-offence. The US Sentencing Commission's report on Recidivism Among Federal Violent Offenders, and its follow-up reports[17] included information on the type of crime committed by re-offenders grouped by their initial (index) offence. For example, 3.6% of offenders who re-offended after being convicted of a drug trafficking offence, did so by committing robbery, while 10.4% re-offended with drug possession. The averages for each type of re-offence were calculated from the reports about offenders initially convicted of firearm offences, drug trafficking, and violent offences. The results were grouped into general categories and used as a predictor of which types of crimes might be committed by T4C participants who re-offend. The table below shows that, of the re-offences, 38.73% are likely to be property/non-violent crimes, 25.13% are likely to be drug related etc.

[17] Hunt, Dumville (2016); Hunt, Laconetti, Maass (2019); Laconetti, Kyckelhahn, McGilton,(2019); Reedt, Hunt, Parker, Reimer, Maass (2017)
Note that reliance was placed on US data. However, differences between the Canadian and US criminal justice system, its process and supports would impact recidivism rates and timing.

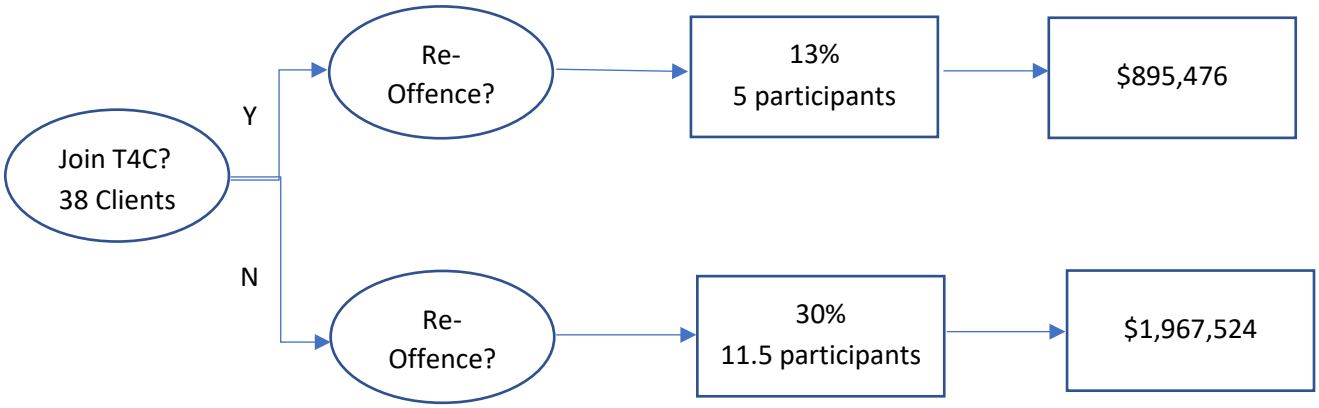
Table 6: Likelihood of Crime Type as a Re-offence

Type of Crime	Likelihood
Property/Non-Violent Offence	38.73%
Drug Offence	25.13%
Other Violent Offence	34.14%
Homicide	2.00%
Total	100.00%

Had there been 100 crimes avoided by T4C, the table above would indicate that approximately 38 of the 100 crimes avoided were property/non-violent crimes, 25 were drug offences, 34 were other violent offences, and 2 were homicide. The cost of each crime would be multiplied by the number of crimes saved to get the total cost savings. Since there were 6 crimes avoided, the table above indicates that 38.73% of the 6 crimes were property/non-violent, 25.13% of the 6 crimes were drug offences etc. By applying the percentages above to the 6 crimes that were avoided, the type of re-offence that was likely avoided through the reduction in recidivism among T4C participants was estimated[18]. Note that the crime types are estimated and do not reflect actual types of crimes committed by T4C participants.

The cost savings are demonstrated in the flowchart below by showing the costs of crimes for the 11 expected re-offences that would have been committed had the 38 participants not joined T4C, and for the 5 re-offences that actually occurred among the 38 participants who joined T4C. The savings of 6 crimes is the difference between the expected 11 and the actual 5.

Diagram 9: Impact of T4C on Costs to the Criminal Justice System



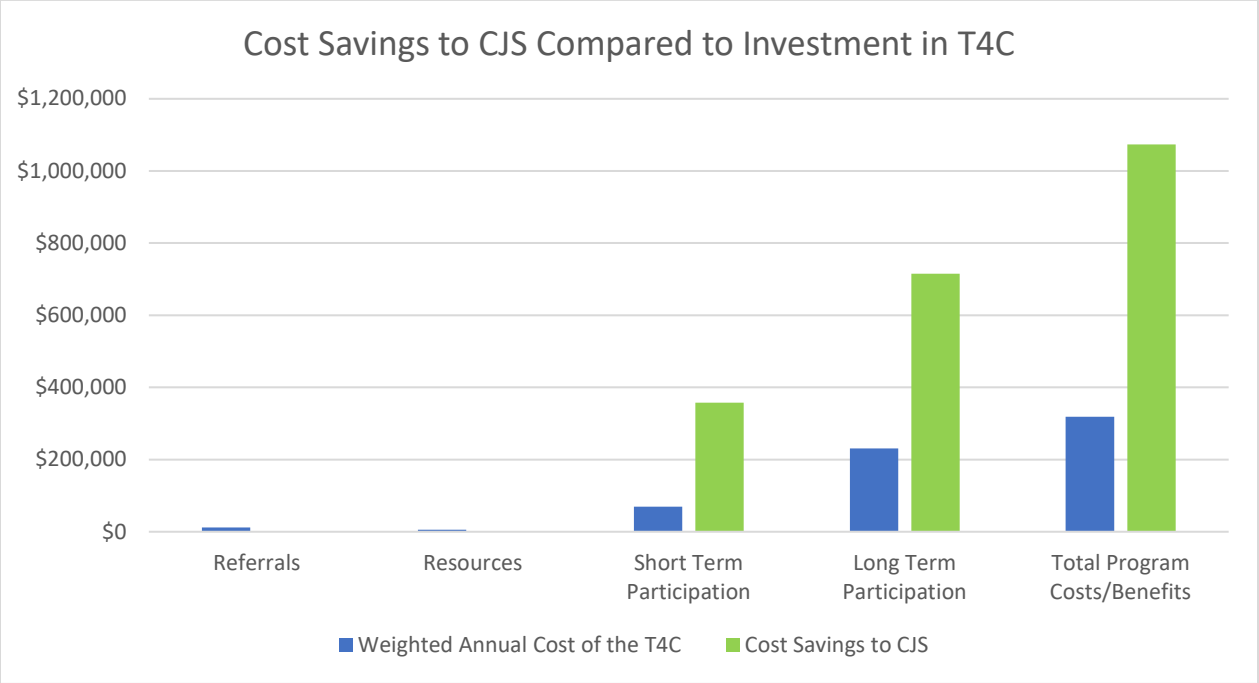
[18] This assumes that T4C is equally as effective for each type of crime, which may not be the case. Determining the impact by crime-type was beyond the scope of this analysis.

Results:

The estimated total cost savings to the criminal justice system resulting from the avoidance of 6 crimes is $1,072,048 ($1,967,524 - $895,476) with return on investment of $3.37 for each $1.00 invested in T4C.

The following chart compares the estimated cost savings to the criminal justice system resulting from the reduction in recidivism assessed above, compared to the cost of T4C. The costs and savings are weighted to show the different relative values for the different categories of participants based on the extent to which they used the program.

Diagram 10: Weighted Costs Compared to Weighted Benefits



Other Cost Savings: Victim, Third Party, and Society

In addition to the cost savings to the criminal justice system calculated above, are the savings in costs borne by the victims of crime and the community, and those of third parties. Among the victim's and third-party costs are medical, hospital, ambulance and insurance costs; funeral and burial expenses, productivity loss, lost wages, cost of victim services and compensation, and intangible costs of pain and suffering, and loss of life. These additional costs

could add up to an additional $1 million[19] in costs per incident, and if considered could increase the cost savings realized by T4C by up to $6 million. The monetary value of the benefits of T4C would also increase if this analysis considered the social and economic values of crime reduction.

Conclusion

Time for Change demonstrated reduced recidivism for the year examined in this analysis, with a corresponding cost savings to the justice system that exceeds the costs of the program. Stakeholders observed that T4C is valuable in connecting participants to support needed to reduce their criminogenic risks. Some observed that it may not reduce recidivism overall, but that it may reduce violence, and gang related offences. Participants and their caseworkers feel the program is valuable in helping reduce recidivism. T4C has demonstrated that it is effective in connecting participants to services to help reduce their criminogenic risks but has not tracked whether these connections are sustained or included these connections in a measure of risk. Connections to these services (education, employment, and housing etc.) have been shown to reduce recidivism[20]. Partnering with OCISO has helped T4C address the cultural needs of the complex clients they work with. Although the John Howard Society has indicated that a change in attitude toward criminogenic behaviour is among the most important changes to impact criminogenic risk, reporting on related indicators was not available for review.

To better demonstrate its effectiveness, T4C needs to create or adopt a more advanced outcome framework, collect the information required to measure performance indicators in the framework, and report on them to stakeholders.

The monetary benefit of savings to the justice system for the period from April 1, 2018 to March 31, 2019 is estimated to be $3.37 per $1.00 invested. The total annual cost savings were calculated to be $1,072,048. The total annual costs of T4C were $318,362. The savings exceed the costs by $753,686 or 236% in addition to other benefits that were not calculated or monetized in this analysis. The cost savings to the criminal justice system will equal the investment in T4C if 1.8 crimes are avoided.

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[19] Hoddenbagh, Zhang, McDonald (2014). The report provides total annual values of victim and third party costs as well as total annual value of justice system costs. The per incident victim and third party costs presented in this analysis were calculated using the same ratios as those for total annual costs from the report, applied to the per incident costs to the criminal justice system that were calculated in this analysis.

[20] Bonta, Andrews (2007); Wooditch, Tang, Taxman (2014); Thompson, Forrester, Stewart (2015); John Howard Society of Ontario (2016); Ministry of the Solicitor General (2016).

Appendix A: Limitations, Assumptions, and Bias

At its inception, and when it began maintaining data, T4C did not set up its performance measurement framework with an analysis like this in mind. Therefore the methodology was designed based on data that was available.

Recidivism is an imperfect measure of program effectiveness. It is subject to estimates and assumptions that are not always relevant to the specific profile of the participant, and it assumes a complete desistance from offending. Following are more specific limitations that should be considered when interpreting the results of this analysis:

1. Information on the number and types of crimes committed by participants before they joined T4C, and the number and types of crimes they committed after leaving the program could not be obtained because of privacy concerns. As a result, this assessment relied on observational data on the types of crimes typical to the participants, and therefore on the types of crimes avoided through reduced recidivism. This impacts the recidivism rates used, and the costs applied to the cost savings calculation.
2. The number of re-offences used in this analysis was the number of new charges among participants while they were active in T4C. This limitation impacts the analysis as follows:
    a. Typical definitions of recidivism used in published research on recidivism rates are for new convictions or returns to custody. This analysis relied on the only information available: new charges. Although new charges were used in this analysis as a proxy for recidivism, those charged with a criminal offence are presumed to be innocent until proven guilty. Because of this, the number of incidents among participants after they joined the program may be overstated. The Department of Justice, Canada's *An Estimation of the Economic Impact of Violent Victimization in Canada, 2009* Hoddenbagh, Zhang, and McDonald (2014) shows that only 13.5% of police reported incidents resulted in a conviction in 2009.
    b. It is not known whether participants subsequently re-offended after leaving T4C. To compensate for this, the expected recidivism rate used in the analysis was adjusted to reflect a 6-month and 12-month time frame based on a US study that observed that 36.8% of those who recidivated in the first five years after release were arrested in the first 6 months, and 56.7% were arrested in the first year. However, this doesn't take into consideration the fact that recidivism for some violent offences is less likely to occur in the immediate short term, and the recidivism observed in the US does not necessarily reflect what would be observed in Canada. In addition, participants may have been active in T4C for less than 6 months and less than 12 months. Three

participants were in the program for 2 years at the time of this report but were included in the assessment using the one year expected rate.

   c. The recidivism research relied on for this analysis looked mostly at 2 years, 5 years, or more after release. The short time frame of 6 months to a year is a less reliable measure. A larger data set over a longer period of time could show that T4C had a much larger impact on recidivism, or it could show that it did not.
   d. Violent crimes can often go unreported. This analysis relied solely on the number of new charges among participants and did not adjust for the likelihood of unreported crimes. The impact of this should be minimal considering that the expected recidivism rates that were used for comparison would also be exposed to the same limitation.

3. Some of the data used in determining the expected recidivism rate, and the likelihood of each type of crime in a recidivism event was taken from US research. Differences in the justice system, programs, and demographics between the US and Canada may reduce the relevance of the US data when applied to a Canadian context.
4. The estimated likelihood of the type of crime committed when a participant re-offends was based on US studies of violent offenders, drug offenders, and firearms offenders. As mentioned above, the relevance of the data is impacted by the differences between the Canadian and US demographics and justice system. Another limitation of this estimate is that it assumes an even distribution of these types of index crimes among T4C participants, and that T4C is equally effective at reducing each type of crime. The studies referenced include some crimes such as rape, that are unlikely for T4C participants based on observational data. Although the estimated likelihood of each crime type in a re-offence was not based on observations of this particular group, the severity of the crime considered in the cost calculation took into account the types of crimes typical of participants based on observational data. For example, the likelihood of a violent crime committed in a re-offence was estimated to be 34.13%. The crime costs applied to this 34.13% included those for assault with a weapon, robbery, and homicide. The costs of crimes such as rape, common assault and criminal harassment were excluded. The limitations in the estimate of the type of crime committed in a re-offence impact the calculation of cost savings to the criminal justice system.
5. The degree of rigour with which the benefits were assessed were impacted by the limited information available at the time of the analysis, and time constraints. For example, some participants may have had a lower expected recidivism rate because they remain on parole or on community supervision, others may have demonstrated a larger reduction in recidivism because they were in the program for more than one year. This analysis used a general rate, adjusted for shorter time frames, and did not consider all the variables that would affect the participants risks of re-offending. Similarly, information

on connecting participants to support was provided, but not on whether the support was sustained.

6. The level of effort spent by T4C on different categories of participants was not tracked, so the cost per participant for each category was calculated using rough estimates. Specific costs of key activities such as hosting community forums, or time spent connecting participants to support was also not available. However, the costs were part of the total costs of T4C that were used in the calculation of cost per participant and cost/benefit.

Assumptions

Assumptions about Recidivism:

1. The recidivism rate used to estimate the expected number of re-offences had the participants not joined T4C assumed the participants were violent offenders with a very high risk of re-offending. This assumption comes from the objective of T4C and is supported by observational data from interviews with stakeholders, including those who refer clients to T4C.
2. The lower recidivism rates associated with "aging out" were not incorporated in this analysis because, according to the US Sentencing Commission's 2019 report "Recidivism Among Federal Violent Offenders,"[21] the rates do not drop as significantly with age for violent offenders as they do with non-violent offenders.

Assumptions about Costs:

1. Costs are calculated assuming only one crime saved per participant who doesn't re-offend.
2. The cost of the avoided crime is estimated assuming the probability of the type of crime committed follows the proportions of re-offences reported in the US Sentencing Commissions' follow ups to "Recidivism Among Federal Violent Offenders"[22]. These reports do not specifically focus on offenders fitting the profile of T4C participants (life of crime, involved in gangs). The proportions provided in the reports and used in this analysis are much higher for non-violent crimes. Since the expectation for the participants is that they will re-offend with similar, violent crimes, the proportions used provide a conservative estimate of the cost of crime.
3. There are many scenarios that would impact the cost of corrections for a convicted offender. This analysis assumes the mandatory minimum sentence is applied to violent crimes, and that the offender is successfully released on full parole after serving 44.9% of the sentence.

[21] Hunt, Laconetti, Maass (2019)

[22] Hunt, Dumville (2016); Hunt, Laconetti, Maass (2019); Laconetti, Kyckelhahn, McGilton,(2019);

Objectivity and Bias:

This analysis relied on data and assessments from the John Howard Society and OCISO which were not validated as part of this assessment. Participants' opinions were obtained through a survey completed with the help of the caseworker and in exchange for a $20 gift card. The responses could be skewed by bias from the consideration offered, and the lack of anonymity that comes with caseworker's presence.

Appendix B: Participant Categories

Referrals:

Referrals are individuals who have been contacted by Time for Change, but who are not actively participating in the program. A referral may be interested in participating in the program, but is unable to because they are incarcerated, or because they face other barriers. Although Referrals are not active participants, they are an important part of the program. For each referral, an individual with criminogenic risks becomes aware of the program, and therefore becomes a potential future participant. The investment of time spent to connect to referrals leads to the benefit of possible future participation in the program. Approximately $12,096 (3.8%) of the total program costs were spent on referrals. The cost per referral was $96. The benefit of future participation in the program was not measured or quantified in this analysis.

Resources:

Some participants joined T4C for the sole purpose of getting connected to resources. These participants did not benefit from continued visits with a caseworker. There could be significant benefit from the connections made for these "Resources" participants. However, because of the limited data available for this group who are in the program for such a short amount of time, it is not currently possible to measure the program benefits received by them other than to say that they have been connected to a resource. For this reason, this analysis included the cost of participants in the Resource category in determining the average total cost per participant but did not include this group in the estimate of reduced recidivism resulting from the program. In 2018-2019, there were 8 participants (17.4% of the total) in the Resources category of the Time for Change program. Approximately $5,779 (1.8%) of the total program costs were spent on Resources. The approximate cost per Resources participant was $722.

Short-Term Participant:

Short-term participants were active in T4C for up to 6 months, with an average of 4 months among participants. Although the frequency with which short-term participants meet with their caseworkers varies, these participants can be expected to take full advantage of the benefits of T4C. For simplicity, costs were allocated to this group under the assumption that caseworkers met with the participant about 4 times per month, and for approximately 3 hours, including preparation time. This is a very broad assumption given that some participants would meet much more frequently, while others may be absent from the program for months between meetings. In 2018/19, 18 (39.1%) of the total participants in the Time for Change program were in the short-term category. Approximately $69,343 (21.8%) of the total program costs were spent on participants in this category. Cost per short-term participant was $3,852.

Long-Term Participant:

Long-term participants were active in T4C for 6 months or more, with an average of 12 months among participants. As with the short-term participants, there is a large variance in the frequency with which long-term participants meet with their caseworkers, so the same generalization of 1 visit per week with about 3 hours per visit was used in allocating program costs. 20 participants (43% of the total) were in the program long-term in 2018/19. $231,144 (72.6%) of the total cost of the program were allocated to this category, with a cost per participant of $11,557.

The cost per participant for the year would have been lower had there been more participants, and higher had there been fewer. However, because of the intensity of the intervention, the contract between CPO and JHS sets the number of participants to 30 annually with 15-20 gang associates/members and families active in service at any one time. 5 fewer participants would increase the cost per participant by about $4,000 for long-term and about $1,500 for short-term.

Appendix C: Calculating the Cost of Crime

Almost all the sources consulted to estimate the cost of crime outlined the many challenges in obtaining a reasonable estimate which include limitations in the availability of data, ability to breakdown level of effort per crime, consistency in definitions, and the crime or offender-specific scenarios that are difficult to foresee. Many of the reports referenced for this analysis offered a total annual cost of crime, and some provided a total annual cost per crime type. The cost per incident was calculated from the information available from a variety of sources. The costs for three components of the criminal justice system were used: police, courts, and corrections.

Police Costs

The policing costs of one incident of crime was taken from Public Safety Canada's *A Better Estimate of Police Costs by Offence Types,* Ellingwood (2015). The report provides estimates of the investigation costs of one incident of crime by crime type for the Ontario Provincial Police (OPP) and the estimate of front-line response costs for the Waterloo Regional Police Service (WRPS). The estimates for the OPP were used in this analysis. The estimate used for Property/Non-violent crime is an average of 9 property/non-violent crimes listed in the report.

Crime	2013 Per Incident Investigative Costs (OPP)	Adjusted for Inflation
Murder- 1st Degree	$997,595	$1,101,966
Murder – 2nd Degree	$245,315	$270,980
Manslaughter	$25,112	$27,739
Average – Homicide		**$466,895**
Aggravated Assault Level 3	$6,686	$7,425
Assault with Weapon/Bodily Harm Level 2	$1,135	$1,260
Robbery	$7,612	$8,453
Average – Other Violent Offence		**$5,712**
Possession – Heroin	$529	$587
Possession – Cocaine	$304	$337
Trafficking – Heroin	$2,511	$2,788
Trafficking – Cocain	$5,334	$5,924
Average – Drug Offence		**$2,409**
Property/Non-Violent	**$1,993**	**$2,213**

This report was the most recent and detailed report on policing costs. The report cautions that the findings are "the results of a pilot project only. With only two different police services providing data, caution should be taken in generalizing and inferring the results. Any conclusions are tentative." These costs could not be verified by Ottawa Police Service.

Comparing the values to those presented in the Department of Justice Report[23], the average of other violent offences is far more conservative ($5,712 compared to $20,581), the average for homicide is less conservative ($466,895 compared to $307,302). Given that 34.14% of the cost savings calculated in this analysis are attributable to other violent offences, and only 2% are attributable to homicide, it is reasonable and conservative to use the values presented in this report. Note that 34.14% of the difference in values for other violent crimes is $5,076. 2% of the difference in values for homicide is $3,191.

Court Costs:

Court costs for robbery, assault, and homicide were calculated using estimates from The Department of Justice's report on the *Economic Impact of Violent Victimization in Canada, 2009*. These amounts are adjusted for inflation, and include court, prosecution and legal aid. The report provides total annual costs for court and prosecution for each type of crime, and total number of incidents

[23] Hoddenbagh, Zhang, McDonald (2014).

of the crime. The report indicated that 22.23% of incidents proceeded to court. To calculate costs per incident, this analysis used the total annual amount divided by 22.23% of the number of incidents.

Offence	Number of Police Reported Incidents	Number of Incidents that Proceed to Court (22.23% of Police Reported Incidents)
Assault	160,027	35574
Robbery	20,067	4461
Homicide	453	101

The costs per incident were calculated using the total annual cost for each crime type indicated in the report divided by the calculated number of incidents that proceeded to court. This was done for court, prosecution, and legal aid.

	Assault		Robbery		Homicide	
Offence	Annual Costs	Cost per Incident	Annual Costs	Cost per Incident	Annual Costs	Cost per Incident
Court	$55,890,153	$1,571	$5,586,682	$1,252	$427,380	$4,244
Prosecution	$37,888,849	$1,065	$3,787,303	$849	$289,728	$2,877
Legal Aid	$26,861,303	$755	$2,685,009	$602	$205,403	$2,040
Total		**$3,391**		**$2,703**		**$9,161**

The cost per incident for assault and robbery were averaged to get the cost for "other violent offences" and an adjustment was made for inflation.

Offence	Court Costs	Inflation: 2009-2019
Homicide	$9,161	$10,847
Other Violent Offences	$3,047	$3,608

Court costs for drug and other non-violent crimes ($3,011 after inflation) were taken from the "adult appearance in court" cost from Public Safety Canada's *Tyler's Troubled Life, The Story of One Young Man's Path Towards a Life of Crime*. (Research Report 2016-R005).

Offence	Court Costs	Inflation: 2015-2019
Adult Court Appearance	$2,810	$3,011

Combining the information above, the total court costs used in this analysis are:

Offence	Court Costs
Homicide	$10,847
Other Violent Offences	$3,608
Drug Offences	$3,011
Property/Non-Violent Offences	$3,011

To compare costs for conservatism, Public Safety Canada's report *The Monetary Cost of Criminal Trajectories for an Ontario sample of Offenders* uses 3 times the costs of corrections for police, courts and legal aids costs rather than calculating court costs. This amount far exceeds those used in this analysis.

Corrections:

The cost of custody is subject to a wide range of probabilities depending on the specific scenario related to the offence and offender. Considerations include whether the arrest proceeds to court, whether the offender is found guilty, the type of and length of sentence received, time spent in remand, the proportion of time served before parole, and whether full parole is granted. For simplicity, the calculation for custody costs assumes the offence was committed with a weapon where relevant, the offender was found guilty and was sentenced to the mandatory minimum sentence, served a partial sentence with the remainder on parole. According to the Public Safety Canada[24] the proportion of sentence served by men prior to being released on first federal full parole was 44.9% in 2017-2018. For this analysis custody costs therefore included only 44.9% of the mandatory minimum sentence.

The property/non-violent custody calculation assumes a sentence of 14.7 months probation, which is the average probation sentence expressed in the Fraser Institute's 2014 Report.[25]

The following table shows the estimated sentence length, cost of custody and cost of parole or probation that was calculated for each type of crime. The calculation is very conservative in that it uses the minimum sentence, reduced to 44.9%. A sentence exceeding the minimum could be assigned to a re-offender, and some would not receive early release after 44.9% of their sentence. Custody costs used were $336 and $237[26] per day for federal and

[24] Public Safety Canada (2018). Corrections and Conditional Release Statistical Overview. Table D6: Proportion of sentence served prior to being released on parole.

[25] Easton, Furness, Brantingham (2014). The Cost of Crime in Canada: 2014 Report. Fraser Institute.

[26] Juristat- Adult and Youth Correctional Statistics in Canada, 2017/2018 $233 and $330 adjusted for inflation

provincial incarceration, $95.91 and $37.89[27] per day for federal and provincial parole, and $23.68[27] per day for provincial probation.

Crime Type	Sentence	Custody (Years) 44.9% of Sentence	Cost of Custody	Parole/ Probation (Years)	Cost of Parole/ Probation	Total Corrections Costs
Murder 1	Life	25	$3,066,000	25	$875,179	$3,941,179
Murder 2	Life	10	$1,226,400	40	$1,400,286	$2,626,686
Manslaughter	4	1.8	$220,261	2.2	$77.156	$297,417
Robbery	4	1.8	$220,261	2.2	$77.156	$297,417
Assault with Weapon / Bodily Harm	4	1.8	$220,261	2.2	$77.156	$297,417
Possession with Intent to Traffick (drugs)	1	0.45	$38,841	0.55	$7,606	$46,447
Drug Trafficking	1	0.45	$38,841	0.55	$7,606	$46,447
Property / Non-Violent	14.7 months probation	N/A	N/A	14.7 months	$10,443	$10,443

Calculated Cost of Crime: Police, Courts and Corrections

The costs of the three components of the justice system were added together. The costs were grouped into general categories by taking the average of the individual crime types. The results are shown below:

Crime	Police Costs	Courts	Corrections	Cost Per Incident
Property / Non-Violent	$1,487	$3,011	$10,443	$14,941
Drug Offence-Average	$2,409	$3,011	$46,447	$51,867
Other Violent Offence	$5,713	$3,608	$297,417	$306,737
Homicide – Average	$466,895	$10,847	$2,288,427	$2,766,169

[27] Department of Justice, Canada (2013). The Justice System Costs of Administration of Justice Offences in Canada, 2009. Parole: $32.00 provincial and $81.00 federal adjusted for inflation; Probation: $20.00 adjusted for inflation.

Appendix D: Estimating the Type of Crimes Avoided

Although there is no way to be sure of the type of re-offence that might have been committed by participants had they re-offended, this analysis used historical data provided in a study as a guide to the likelihood of the type of re-offence. The US Sentencing Commission's report on Recidivism Among Federal Violent Offenders, and its follow-up reports[28] included information on the type of crime committed by re-offenders grouped by their initial (index) offence. For example, the table below shows that 3.6% of offenders who re-offended after being convicted of a drug trafficking offence, did so by committing robbery, while 10.4% re-offended with drug possession. The averages for each type of re-offence were calculated from the reports about offenders initially convicted of firearm offences, drug trafficking, and violent offences.

Re-offence	Firearms as Index Offence	Drug Trafficking (Heroin) as Index Offence	Violent Prior Offenders *arrested for a new crime or supervision violation	Average	Grouped to General Categories	
Homicide	2.6%	1.4%	2.0%	2.00%	2.00%	Homicide
Robbery	5.7%	3.6%	4.7%	4.67%	34.13%	Violent
Assault, Rape, Other Violent Offence	32.7%	17.9%	33.0%	27.87%		
Weapon	2.4%	1.4%	1.0%	1.60%		
Drug Possession/ Other Drug	11.2%	10.4%	9.6%	10.4%	25.13%	Drug
Drug Trafficking	13.5%	18.0%	12.7%	14.73%		
Other Categories/ Non-Violent	31.8%	47.2%	37.2%	38.73%	38.73%	Non-Violent

The results were grouped into general categories and used as a predictor of which types of crimes might be committed by T4C participants who re-offend.

[28] Hunt, Dumville (2016); Hunt, Laconetti, Maass (2019); Laconetti, Kyckelhahn, McGilton,(2019); Reedt, Hunt, Parker, Reimer, Maass (2017)
Note: Differences in the justice system, programs, and demographics between the US and Canada may reduce the relevance of the US data when applied to a Canadian context.

The table below shows that, of the re-offences, 38.73% are likely to be property/non-violent crimes, 25.13% are likely to be drug related etc.

Type of Crime	Likelihood of Crime Type as a Re-Offence
Property/Non-Violent Offences	38.73%
Drug Offences	25.13%
Other Violent Offences	34.14%
Homicide	2.00%
Total	100.00%

Since there were 6 crimes avoided, the table above indicates that 38.73% of the 6 crimes were likely property/non-violent, 25.13% of the 6 crimes were drug offences etc. The table below shows the proportion of each crime type that was used in the calculation of cost savings resulting from 6 crimes avoided (11 expected re-offences less 5 actual re-offences) by T4C participants:

Type of Crime	Likelihood of Crime Type as a Re-Offence	Proportion of 11 Expected Re-Offences by Crime Type	Proportion of 5 Re-Offences During the Year by Crime-Type*	Proportion of 6 Avoided Crimes by Crime Type
Property/Non-Violent Offences	38.73%	4.26	1.94	2.32
Drug Offences	25.13%	2.76	1.26	1.51
Other Violent Offences	34.14%	3.76	1.71	2.05
Homicide	2.00%	0.22	0.10	0.12
Total	100.00%	11.00	5.00	6.00

*Crime types are estimated using the technique above and do not reflect actual types of crimes committed.

Appendix E: List of Data Points and Sources

Data Point	Value	Year	Source	Comment
Recidivism Rate for High Risk Offenders	64%	2014	Ontario, Ministry of the Solicitor General https://www.mcscs.jus.gov.on.ca/english/Corrections/RatesRecidivism.html	Rate used is that for the very high risk category as this reflects the target participants for T4C
Proportion of a 5 year recidivism value that took place in the first 6 months, first year.	36.8% of the rate in the first 6 months; 56.7% of the rate in the first year	2010	US-Bureau of Justice Recidivism of Prisoners Released in 30 States in 2005 Patterns from 2005 to 2010	Caution: Differences between US and Canada impact the relevance of this data point.
Recidivism Rate for offenders involved in gangs, drugs, guns, with a criminal history	1. Almost 100%; 2. 30% in 6 months; 50% in one year; 70 or so in the long term	N/A	1. Observational data: Police Inspector; 2. Observational data: Federal Parole Officer	
Recidivism Rate for violent re-offence	6.7%	2019	CSC, A Comprehensive Study of Recidivism Rates among Canadian Federal Offenders Rate was calculated from table 10, taking an average of the types of crimes used in the report	This rate is very conservative given that it does not reflect the profile of a T4C participant.
Minimum Sentences	various		Per Criminal Code-Justice.gc.ca- Appx A Canada-Mandatory Sentencing;	
Other Sentences	Property/Non-Violent: 14.7 month probation	2014	Easton, Furness, Brantingham (2014). The Cost of Crime in Canada: 2014 Report. Fraser Institute.	
Average Daily Inmate Cost-Provincial-Ontario	$237	2017/2018	Juristat- Adult and Youth Correctional Statistics in Canada, 2017/2018 $233 adjusted for inflation	Average daily inmate cost is derived based on the institutional operating costs (custody) and the actual-in count (which represents persons held in custody under sentence, remand or who are otherwise legally required to be in custody and who are present at the time the count is taken) provided via the Corrections Key Indicator Report for Adults.

Average Daily Inmate Cost - Federal	$336	2017/2018	Juristat- Adult and Youth Correctional Statistics in Canada, 2017/2018 $330 adjusted for inflation	Average daily inmate cost is derived based on the institutional operating costs (custody) and the actual-in count (which represents persons held in custody under sentence, remand or who are otherwise legally required to be in custody and who are present at the time the count is taken) provided via the Corrections Key Indicator Report for Adults.
Daily Cost of Parole- Provincial	$37.89	2009	DOJ 2013 report on administration of justice offences, $32 adjusted for inflation	
Daily Cost of Probation- Provincial	$23.68	2009	DOJ 2013 report on administration of justice offences, $20 adjusted for inflation	
Cost of Parole- Federal	$95.91	2009	DOJ 2013 report on administration of justice offences, $81 adjusted for inflation	
Police Cost per Incident	Various	2013	Calculated from data in Public Safety Canada's "A Better Estimate of Police Costs by Offence Types". The report provides two separate data sets: one for investigation (OPP) and one for calls for service (Waterloo). The values were adjusted for inflation.	The findings in this report are the results of a pilot project only. With only two different police services providing data, caution should be taken in generalizing and inferring the results. Any conclusions are tentative. Two officers per incident have been chosen for the calculation to create as conservative yet realistic average estimate as possible for salary. The Ontario Provincial Police data set includes the total time per aggregated offence type and covers the time from the offence being opened to the close of the case, thus comprising investigative policing costs.

Average Court Costs per Case	Assault: $4,0260; Homicide: $10,878; Robbery: $3,210	2009	Hoddenbagh, Zhang, McDonald (2014). An Estimation of the Economic Impact of Violent Victimization in Canada, 2009. Research and Statistics Division, Department of Justice, Government of Canada. The values were calculated using data from the report and adjusted for inflation.	The report provides total annual costs for court and prosecution for each type of crime, and total number of incidents of the crime. The report indicated that 22% of incidents proceed to court. To calculate costs per incident, this analysis used the total annual amount divided by 22% of the number of incidents.
Average Court Costs per Case	Drugs: $3,011 Property/Non-Violent: $3,011	2016	Public Safety Canada (2016). Tyler's Troubled Life. The Story of One Young Man's Path Towards a Life of Crime. (Research Report 2016-R005)	
Likelihood of Re-offence type	Various	2019	Recidivism Among Federal Violent Offenders US Sentencing Commission- 2017/19 Follow ups: Separate reports for Violent Offenders, Firearm offenders and drug offenders. Report provided re-offence type by index offence. This analysis averaged the three to determine a likelihood of re-offence type for participants.	Caution: Differences between US and Canada impact the relevance of this data point.

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