

Copyright © 2012 International Journal of Criminal Justice Sciences (IJCJS) – Official Journal of the South Asian Society of Criminology and Victimology (SASCV) ISSN: 0973-5089 July – December 2012. Vol. 7 (2): 562–574

This is an Open Access article distributed under the terms of the <u>Creative Commons Attribution-Non-Commercial-Share Alike License</u>, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited. This license does not permit commercial exploitation or the creation of derivative works without specific permission.



Prolific and Priority Offenders in British Columbia, Canada: A Preliminary Analysis of Recidivism¹

Stefanie N Rezansoff²
Akm Moniruzzaman³
Julian M. Somers⁴
Simon Frazer University, Canada

Abstract

This paper is a preliminary analysis of a Prolific and Priority Offender Management multi-site initiative operating in British Columbia, Canada. We analyzed pre-post changes in offender behaviour in six British Columbia communities (N=197). Outcomes were examined via the British Columbia Inter-Ministry Research Initiative, which includes linked administrative data corresponding to health, justice and social services. Our longitudinal analysis suggests that offender enrolment in the program was associated with a significant reduction in recidivism (>40%). Mean custody time and recorded negative police contacts also decreased, suggesting that reduced recidivism was likely not attributable to reduced offending opportunities due to incarceration and that offenders were less active in offending overall. Significant increases in health and social service use were also observed, substantiating previous studies indicating that prolific offenders do not engage in health and social services at levels commensurate with their needs. Results confirm the potential for a number of benefits associated with inter-agency collaboration and management of prolific offenders, including reduced recidivism, improved offender welfare and enhanced community safety.

Keywords: PPO, recidivism, police-probation partnerships, property crime, offender management, supervision

Introduction

There is emerging consensus in correctional literature that a disproportionate amount of crime (particularly property crime) is committed by a minority of offenders (Marlow, 2007; Mawby & Worrall, 2004; Millie & Erol, 2006; Vennard & Pearce, 2004). There is also general agreement among scholars that custody alone is a relatively ineffective method of reducing offending (Moore *et al.*, 2006), and that 'getting tough on crime' has been

¹ This study underwent institutional review and was approved by the Research Ethics Board of Simon Fraser University.

² Faculty of Health Sciences, Simon Fraser University, Burnaby, British Columbia, Canada.

³ Faculty of Health Sciences, Simon Fraser University, Burnaby, British Columbia, Canada.

⁴ Associate Professor, Faculty of Health Sciences, Simon Fraser University, Burnaby, British Columbia, Canada. Email: jsomers@sfu.ca

unsuccessful (Andrews & Bonta, 2010). These realizations have spurred a variety of programs in several countries that emphasize inter-agency collaboration as a means of improving offender outcomes and increasing community safety (Mawby & Worrall, 2004). Illustrative programs are predicated on the emerging concept of therapeutic jurisprudence (Public Safety Canada and Alberta Solicitor General, 2010) and growing evidence that successful criminal justice policy requires a focus on evidence-based offender treatment and rehabilitation practices (Andrews & Bonta, 2010).

A central feature of this new approach is targeted and intensive offender surveillance, with a core component involving coordinated police and probation partnerships or "polibation" (see Nash, 1999). These partnerships are further supported by an integrated team of service providers that deliver interventions tailored to local priority and prolific offenders including substance use and mental health treatment, as well as referrals to employment, income assistance and housing programs. This assertive outreach is complemented by a second component of the strategy – prompt apprehension and conviction following re-offending or breaches of sentence conditions (Worrall & Mawby, 2004). Swift response to re-offending is expedited by dedicated Crown Counsel who manage files generated as a result of the targeting and increased supervision of offenders. To date, these strategies have predominantly applied toward chronic property crime offenders (Mawby & Worrall, 2004; Merrington, 2006; Vennard & Pearce, 2004).

By design, these programs give rise to two quite different outcome measurements, each implying possible program success (i.e., a reduction in convictions and timely reconvictions). As a consequence, the clear selection of appropriate measures of effectiveness has important implications for research and evaluation. The majority of the available evaluations are based on initiatives in England and Wales (see Roberts, 2005). Variations of the scheme have also been evaluated in Australia, the United States and at the federal level in Canada (Pottruff, 2010). While the US has become the world leader in intensive supervision programs (ISP) for adult offenders, it is important to note that there is no standardized ISP model (Moore et al., 2006). Few peer-reviewed outcome analyses of such programs exist.

Whereas deterrence is the cornerstone of most US initiatives (which date back to the 1960s), UK projects tend to include a corresponding focus on offender treatment and rehabilitation (Moore et al., 2006). Worrall & Mawby (2004) describe "three generations of intensive supervision" (p.268). These began in the early 1970s with a now infamous project called IMPACT (Intensive Matched Probation and After-Care Treatment), which involved matching offenders to various types of probation interventions. Evaluations reported very unfavorable results, including higher rates of recidivism among program participants than non-participants (Worrall & Mawby, 2004). A number of similar ISPs followed in the 1980s and early 1990s. These also included a focus on surveillance and were primarily targeted at young adults between the ages of 17 and 25 (Moore et al., 2006). While these were also largely unsuccessful at reducing recidivism, evaluations did identify a number of secondary benefits associated with the projects (Worrall et al., 2003). Fast tracking of drug assessments and treatments were recognized as particularly valuable (Worrall, 2001).

Current (or "third generation") practices include components of both these earlier models, including "deterrence, incapacitation and rehabilitation" (Worrall & Mawby, 2004, p. 270) as well as an important paradigm shift in the definition of "success" to include both reductions in recidivism and timely reconviction. The outcomes of these

more recent initiatives are more promising than their earlier counterparts. Notwithstanding this broadened interpretation of success, evaluation of the national Priority and Prolific Offender scheme introduced in the UK in 2004 revealed a 43% drop in recidivism among participants over the first 17 months of the program (see Dawson & Cuppleditch, 2007).

A wide range of operational definitions are used throughout correctional literature and many terms are used interchangeably (e.g. chronic/persistent/prolific/priority/habitual offender). In keeping with more recent strategies implemented in the UK, we have chosen to use the term "Prolific and Priority Offender" (PPO), which is often locally defined. In our study, a PPO is defined as an individual with a high offence rate, who is assessed to be at high risk of reoffending following release from custody.

Previous evaluations of PPO management (hereafter PPOM) programs have been criticized for their small sample sizes, inadequate comparison groups and lack of cost-effectiveness analyses (Merrington, 2006; Moore et al., 2006; Vennard & Pearce, 2004). Given these previous methodological limitations and the difficulties of random assignment to such an intervention, investigators have attempted to minimize the impact of confounding variables on outcomes by using a propensity score matching (PSM) method. PSM is a statistically intensive technique used to establish causal inference and limit selection bias in non-experimental research designs (Dehejia & Wahba, 2002).

Unfortunately, due to the complex and heterogeneous nature of PPOs (Dawson & Cuppleditch, 2007), and their higher levels of need than non-prolific offenders (Merrington, 2006), divergence between the PPO and "matched" individuals limits the viability of the PSM method. A 2007 evaluation of the national UK PPO program was unsuccessful at establishing a valid counterfactual using PSM (see Dawson & Cuppleditch, 2007). The diversity of risks and needs among PPOs may be so diverse that the only thing they have in common is their volume of crime.

Recent literature indicates that significant reductions in recidivism of up to 35% are associated with treatment programs that adhere to the well established "Risk, Needs, Responsivity" (RNR) model of offender rehabilitation (Bonta et al., 2011). Bonta et al. refer to this model as a "psychologically informed approach" (2011, p.1128) to correctional treatment. The overall reasoning behind the model is that treatment must be precisely tailored to individual requirements. Specifically, service providers aim to match levels of service with levels of risk (risk principle); to target offenders' criminogenic needs (needs principle); and to assign offenders to appropriate forms of treatment - often cognitive-behavioral interventions (Bonta et al., 2011). Furthermore, findings also show that not adhering to the RNR approach may actually increase recidivism (Andrews & Bonta, 2010). Fundamental to RNR-based treatment is an understanding of motivation and behaviour change (Andrews & Bonta, 2010), including the Stages of Change Model (see McConnaughy et al., 1989). The principles of the RNR model are highly apt and relevant to the design and practice of PPOM programs. To date, however, we are aware of no studies that examine the formal correspondence, or fidelity, between PPOM programs and RNR.

In the Canadian context, police-parole partnerships have been established at the municipal (e.g., Vancouver Police Chronic Offender Program) and federal levels, including the Integrated Police-Parole Initiative (IPPI) (see Axford & Ruddell, 2010). As with the BC PPOM program, the police-parole partnership within the Vancouver Police Chronic Offender Program is further supported by dedicated Crown Counsel, who

manage files generated as a result of offender targeting and increased supervision. However there are few published evaluations of these projects. Our findings add to earlier outcome analyses of PPOM initiatives, focusing on outcomes from a multi-site initiative in the Province of British Columbia (BC) Canada.

The objectives of this study are to investigate client characteristics and recidivism outcomes associated with the 2008 implementation of a PPOM program in six BC communities. We examine the volume and types of offences within the cohort. Police contacts are studied in order to assess whether the nature of these contacts varies over time. In addition, we examine whether participants are heavy users of services beyond the justice system (specifically health and social welfare services). Finally, using a pre-post design, we investigate the longitudinal association between program participation and community safety, as indicated by changes in the rate of offending within the cohort.

Our two primary hypotheses are that the BC PPOM project reduces recidivism among participants, and modifies participant uptake of services delivered by multiple participating agencies.

Methods

The Six Pilots

In February 2008, the PPOM project was launched in six British Columbia communities: Victoria, Kamloops, Nanaimo, Prince George, Surrey and Williams Lake. These sites were selected to reflect a variety of geographic locations and population sizes. Participants were recruited over a span of two years (from February 1, 2008 to January 13, 2010), and identified by local teams based on a common set of guidelines along with local knowledge of the offender population. Teams were not constrained to identifying participants solely based on number of offences. Participants were then advised of their enrolment by letter.

The project was based on the national PPOM scheme introduced in the UK in 2004 (see Dawson & Cuppleditch, 2007). The key objectives of the project are to reduce the level of recidivism within the cohort and to reduce the volume of crime attributable to PPOs in each community. Modeled on other PPO initiatives, these outcomes are pursued by promoting integration among team members and liaison to appropriate services.

Each local team was composed of representatives from a wide variety of agencies: police, probation, crown counsel, psychiatry, social assistance, child and family services and housing. Teams had the flexibility to tailor their services to individual communities and to add additional team members deemed important to local effectiveness (e.g., Aboriginal agencies).

Additional funding was provided to support the six Team Coordinator roles. The project was otherwise managed through the reallocation of existing resources.

Cohort size in each community ranged from 14 to 56 participants, depending on available capacity to provide needed services and the size of the community. Offenders in custody, hospital or treatment were considered as potential candidates if they would be returning to the community within the life of the pilot project. Legal status was *not* a criterion for inclusion in the project. Offenders could be removed from the cohort under one of the following conditions:

a) The offender was stable and crime free in the community for at least a year and their risk to reoffend has dropped significantly;

- b) The offender was incarcerated for a period that exceeds the life of the project;
- c) The offender was permanently relocated or died.

In keeping with Risk-Needs-Responsivity principles, relapse and reoffending were expected and built into the BC PPOM treatment plan. The context in which relapses occur was considered when making decisions regarding new offences or breaches of conditions. Recommendations regarding sentencing and bail were made on a case-by-case basis by Crown Counsel, and based on information provided by the PPOM team.

Data Sources

We examined data from the British Columbia Inter-Ministry Research Initiative (IMRI), which integrates administrative records from publicly funded departments responsible for delivering justice, health and social welfare services to the population of BC. The purpose of this initiative is to develop and maintain an inventory of health and income assistance services used by corrections clientele in British Columbia to support the evaluation of multi-agency programs. Specifically, non-identifying administrative data were obtained from three independent provincial government ministries: the Ministry of Justice (MOJ), the Ministry of Health (MOH); and the Ministry of Social Development (MSD).

Participants were recruited over a span of two years (from February 1, 2008 to January 13, 2010). The linked data described above were analyzed using a repeated measures design. Student *t* tests were used to determine the significance of the observed changes in offences (convictions), social assistance, and health care utilization within the cohort. Results are considered significant at the 0.05 level. Annualized rates of services in the post period were estimated based on participants who had at least one year of post-enrolment follow-up. Annualized rates in the pre-enrolment period were estimated based on the average of two years before enrolment.

Results

Table 1 provides details of socio-demographic variables measured among the six sites. Sample sizes ranged from 14 to 56 participants.

Sample Characteristics

Mean age at enrolment was 31 years. The majority of participants were Caucasian (68%) and male (93%), and 23% of the cohort was of self-reported Aboriginal⁵ ethnicity.

The majority of participants reported having attained an education level of Grade 11 or lower (65%), with the remainder having completed high school (26%) or more advanced education (9%).

Pre/Post Changes in Criminal Justice Involvement of Study Participants

In table 2 (and throughout this paper), "offences" are defined as all convicted offences committed by members of the PPOM cohort. Our definition does not include the relatively small number of incidents that were resolved through alternate measures or the payment of fines.

566

⁵ Including all indigenous people of Canada (i.e., Status Indians, Non-Status Indians, Métis and Inuit people).

Table 1: Socio-demographic characteristics of study participants (N=198)

		N	%
POM pilot site	Victoria	34	17%
	Nanaimo	31	16%
	Kamloops	56	28%
	Surrey	35	18%
	Prince George	28	14%
	Williams Lake	14	7%
Gender	Male	185	93%
	Female	13	7%
Ethnicity	Caucasian	134	68%
	Aboriginals	46	23%
	Other	18	9%
Education level	Grade 7/8/9	27	14%
	Grade 10/11	96	51%
	Grade 12	49	26%
	Other	16	9%

Over all of the years available for observation in our database (1997 onward), members of the combined PPO cohort recorded over 30 offences per person. Nearly 16 offences per person were recorded in the 5 years prior to enrolment. During the baseline period of two years prior to enrolment in PPOM, participants committed an average of 3.7 offences per person per year. The majority of these were property offences although breach offences were also common. Violent offences as well as drug and alcohol offences were relatively infrequent among members of the PPOM cohort (0.3 and 0.4 respectively). Between the pre and post periods, offending decreased significantly in *each* offence category, contributing to a significant reduction in overall crime within the cohort (P<0.001). The category with the largest magnitude of decrease was property crime (P<0.001).

Mean custody time also decreased by approximately 13% (over 17 days per person/per year), but this reduction was not statistically significant.

Pre/Post Changes in Police Contact among Study Participants

A significant decrease in the overall number of police contacts occurred between the pre and post periods (see Table 3). While neutral police contacts increased, the increase was not significant. The overall reduction in police contacts reflects a significant decrease in the number of negative police contacts over the period of observation, from a mean of 10.1 to 7.1 per person per year.

Note: negative police contacts are those associated with arrest or detention, while neutral contacts involve pre-emptive actions such as curfew checks, or routine patrol.

Table 2: History of criminal justice involvement for POM participants (N=192⁶)

Variables	Mean (SD)	P
		value ⁷
Overall Offences		
Number of offences (over all years observed)	30.7 (18.9)	
Number of offences in pre-enrolment (past 5 years)	15.8 (9.9)	
Number of offences per year (pre-enrolment) ⁸	3.7 (2.9)	
Number of offences per year (post-enrolment) ⁹	2.2 (2.6)	
Change ([↓]) per year (pre-post)	1.5 (3.4)	<0.001
Violent offences		
Number of offences per year (pre-enrolment)	0.3 (0.6)	
Number of offences per year (post-enrolment)	0.1 (0.4)	
Change (↓) per year (pre-post)	0.2 (0.7)	0.001
Property offences		
Number of offences per year (pre-enrolment)	1.5 (1.8)	
Number of offences per year (post-enrolment)	0.8 (1.5)	
Change (↓) per year (pre-post)	0.7 (2.2)	< 0.001
Breach offences ¹⁰		
Number of offences per year (pre-enrolment)	1.1 (1.3)	
Number of offences per year (post-enrolment)	0.8 (1.3)	0.016
Change (↓) per year (pre-post)	0.3 (1.5)	
Drug and Alcohol offences		
Number of offences per year (pre-enrolment)	0.4 (0.8)	
Number of offences per year (post-enrolment)	0.2 (0.6)	
Change (♥) per year (pre-post)	0.2 (0.8)	0.006
Custody time		
Number of days per year (pre-enrolment)	126.2 (91.2)	
Number of days per year (post-enrolment)	109.0 (108.0)	
Change (U) per year (pre-post)	17.2 (115.5)	0.071
0 (/1 / \d 1 /		
Time to first recidivism (in days) in post-		
enrolment period ¹¹		
	111.4 (110.2)	_

_

 $^{^6}$ Annualized rate was estimated based on participants who had at least one year post-enrolment follow up time (N=150)

⁷ Paired t test was used to compare offences between pre and post period (N=150)

⁸ Annualized rate in pre-enrolment period was estimated based on last two years before enrolment (N=150)

⁹ Annualized rate in post-enrolment period was estimated based on one-year period after enrolment (N=150)

¹⁰ A 'breach' offence is committed when an offender fails to meet the conditions and requirements of probation and is subsequently convicted of breaking or violating the terms of the probation contract.

¹¹ Restricted to participants with at least one offence in the one year post–enrolment period

Table 3: Number of police contacts (N=197)

	Pre-period	Post-period	P value
Overall number of contacts (per			
year)			
Mean (SD)	13.8 (10.6)	11.2 (10.5)	<0.002 (t test)
Median (IQR)	11 (7, 17)	9 (4, 15)	<0.014 (Wilcoxon sign)
Min, Max	0-56	0-79	
Number of negative contacts (per			
year)			
Mean (SD)	10.1 (8.9)	7.1(7.7)	<0.000 (t test)
Median (IQR)	8 (5, 13)	5 (2, 10)	<0.000 (Wilcoxon sign)
Min, Max	0-52	0-63	
Number of neutral contacts (per			
year)			
Mean (SD)	3.7 (3.4)	4.1 (4.8)	<0.242 (t test)
Median (IQR)	3 (2, 5)	3 (1. 6)	<0.355 (Wilcoxon sign)
Min, Max	0-22	0-33	

Table 4: History of social assistance and health care utilization for PPOM participants (N=187)

Variables	Mean per capita	P value ¹²
Physician payments	(3D)	
Total payments (lifetime)	\$5,951 (\$5,590)	
Total payments in pre-enrolment (past 5 years)	\$1,860 (\$2,324)	
Total payment per year (pre-enrolment ¹³)	\$372 (\$483)	
Total payments per year (post-enrolment ¹⁴)	\$563 (\$963)	
Change (f) per year (pre-post)	\$191 (\$830)	<0.001
Hospital days		
Number of days (lifetime)	10.4 (23.6)	
Number of days in pre-enrolment (past 5 years)	3.8 (12.5)	
Number of days per year (pre-enrolment ⁷)	0.7 (2.5)	
Number of days per year (post-enrolment ⁸)	0.6 (2.1)	
Change ([↓]) per year (pre-post)	- 0.1 (2.5)	0.638
Social Assistance payments		
Total payment (lifetime)	\$32,720 (\$27,078)	
Total payment in pre-enrolment (past 5 years)	\$10,280 (\$11,800)	
Total payment per year (pre-enrolment ⁷)	\$2,432 (\$2,870)	
Total payment per year (post-enrolment ⁸)	\$3,473 (\$3,643)	
Change (Î) per year (pre-post)	\$1,041 (\$3,063)	<0.001

 $^{^{12}}$ Paired t test was used to compare payment and hospital days between pre and post period and restricted to patients who had at least one year post-enrolment follow up time (n=147)

569

¹³ Annualized physician payment, hospital days and social assistance payment in pre-enrolment period was estimated based on the two-year period

¹⁴ Annualized physician payment, hospital days and social assistance payment in post-enrolment period was estimated based on 12 months follow up time

Pre/Post Changes in Social Assistance and Health Care Utilization among Study Participants

Physician service costs increased significantly within the PPOM cohort, from a mean amount of \$372 to \$563 (see Table 4). No significant change in hospital days was observed between the pre and post periods.

A significant increase was observed in amount of social assistance payments. The mean amount provided in the post period (\$3,473) was approximately 43% greater than the amount paid in the two years pre-PPOM.

Discussion and Conclusion

Our longitudinal analyses suggest that British Columbia's multi-site PPOM program was associated with significant reductions in offending. Within the total cohort, the number of offences per person decreased significantly during the one year follow-up period. This overall effect was largely a function of a decline in property offences, although breach offences also decreased. However, offending decreased in *each* offence category, including violent offences and drug & alcohol related offences, contributing to a significant reduction in overall crime within the cohort. The magnitude of the reduction is consistent with previous findings in the UK (Dawson & Cuppleditch, 2007; Marlow, 2007; Roberts, 2005).

During the same period in which offences declined, mean custody time fell by over 13%. While this was a non-significant decrease, it is nevertheless relevant for two reasons: first, custody related costs are considerable, valued at \$193.75 per day in British Columbia (Ministry of Public Safely and Solicitor General, 2010); second, a pre-post decrease in custody time suggests that the observed reduction in offending was likely *not* attributable to reduced opportunities to offend due to incarceration. Moreover, although the decrease in overall offences was largely driven by a significant decrease in property offences, the decrease in breach offences (also significant) is notable, given that participants were subject to a higher level of surveillance, which could be expected to increase the detection of crime if offending behaviour is taking place.

Changes in offending were accompanied by a significant reduction in recorded police contacts (i.e., contacts entered in the police management records system). This was largely driven by a significant decrease in the number of recorded *negative* police contacts over the period of observation. Moreover, the decrease in *negative* police contacts is consistent with the observed reduction in sentenced offending, suggesting that PPOM participants were not only less likely to be convicted, but were less active in offending behaviour overall. While the increase in *neutral* police contacts was not significant, it is in the desired direction, and it is possible that additional informal (i.e., meet and greet) police contacts took place, but these are not captured by the databases used in our research.

We note that despite the presumed need for health care within PPO cohorts (e.g., mental health care, substance-related treatment), the level of care provided to the present cohort was lower in the pre-program period than the amount of health services received by the general BC offender population. The use of community health services and social assistance services increased significantly during participation in the PPO program. The observed increase in outpatient health care may reflect a number of potential causes, including: personal neglect of health in the pre-period; difficulty accessing physician care pre-program; and detection and treatment of illness in the post-period. Referring to similar projects in the UK, Worrall et al. (2003) conclude that "...contributions of the

health representatives were integral...", and emphasize the importance of substance use treatment: "...stabilization of the participants' drug use underpinned everything that followed" (p.9). Further examination of increased service use and its potential relationship to reduced offending is an important focus for subsequent research.

Social assistance payments to PPOM participants also increased significantly from \$2,432 to \$3,473 per year during their participation in the program. This finding implies that participants had unmet needs for social assistance at baseline, and that the program facilitated access to levels of support that better reflect their needs, and their eligibility.

Our baseline data indicate that PPOM participants were clients of multiple agencies prior to enrolment. However, our results suggest that at baseline, participants were not engaging health and social services to their greatest advantage, or at levels that were commensurate with their needs. Plausible explanations for the observed increases in healthcare and social welfare include effective brokerage by the PPOM team, and the reduction of chaotic life circumstances (e.g., ongoing offending, precarious housing) through the active support of the PPOM team members. Our results are consistent with the finding that PPOs have higher levels of need than non-persistent but serious offenders (Merrington, 2006), and with the RNR principle of offender rehabilitation.

Socio-demographic variables of the BC cohort also confirm a "universal criminological truth: that people in prison are not drawn in equal numbers from all neighborhoods" (Fox, Albertson & Warburton, 2011, p.122). Our analyses show that the PPOM group resembles the overall offender population on educational attainment, but is more heavily comprised of male participants. Our results are consistent with findings reported by Statistics Canada on the relatively low level of education completed among offenders in provincial jurisdictions (Calverly, 2010) and rates of educational attainment among participants in Intensive Supervision and Surveillance Programs in the UK (Moore et al., 2006). Moreover, using convicted offences as a proxy for reduced offending is likely to result in an underestimate of overall offending, if one considers undetected crime.

Directions for Future Studies

Merrington (2006) urges the consideration (and evaluation) of other potential benefits associated with PPOM initiatives and suggests that "a case can be made for rehabilitation in its own right" (p.356). While we briefly address this by assessing an increase in the uptake of community medicine and social assistance among members of the PPOM cohort, our preliminary results require replication in a range of samples and settings, and using controlled designs.

Worrall et al. (2003) warn that PPOM programs may merely perform a maintenance function, (i.e., that they may only be effective in reducing offending while participants are actively engaged in the program). Little is known regarding the desired duration of supervision, and the successful drawing down of PPOM services while maintaining earned improvements in offender health and public safety. Longer-term participant follow-up, (e.g., survival analysis) is required in order to evaluate these important practical questions concerning the resourcing and duration of PPOM initiatives.

In light of challenges faced by researchers using quasi-experimental methods such as PSM (see Dehejia & Wahba, 2002), future research of PPOM programs should include experimental study designs. Given the difficulty of separating the effects of PPOM from other factors that might affect offending rates, it may be useful to incorporate mixed methods (i.e., qualitative and quantitative techniques) in subsequent evaluations. The

perceptions of program participants and program staff may shed invaluable light on the most salient unmet needs among participants, opportunities to support PPOs differently through integrated responding, and possible barriers faced at the community level.

Finally, evidence of cost-effectiveness is increasingly consulted in the determination of public policy. Few evaluations that we know of have addressed this critical evaluation component in relation to PPOM programs (e.g., Drake, Aos & Miller, 2009; Roberts, 2005). This is largely due to the many limitations associated with performing such analyses. These include a lack of standardized costs, few estimates of intangible costs of crime, and the absence of studies analyzing the benefits of potential long-term returns on PPOM program investment (Fox & Warburton, 2011). Despite decreasing crime levels in Canada (Brennan & Dauvergne, 2011), the increase in the prison population has been slow but consistent (Calverly, 2010). Furthermore, custody costs are projected to increase due to inflation and increasing fixed costs (Fox & Warburton, 2011). This situation is driving policy makers to rethink the balance between custody and community supervision in many jurisdictions (Bonta et al., 2011), particularly in the United States (Drake et al., 2009). The present findings add to the emerging literature that confirms the effectiveness of PPOM as a means of improving public safety while simultaneously improving health and social supports for offenders. The development of robust cost-outcome or costavoidance analyses could address whether these changes are also fiscally prudent.

Conclusion

PPOMs offer opportunities for improved public safety, better integration among justice partners and greater access to health and social services in response to the needs of offenders. It also illustrates a pragmatic approach to effective offender treatment and rehabilitation — an established and commendable objective of correctional policy in Canada and many other countries. Finally, it offers the prospect of "…crime prevention… [as]…a legitimate and noble pursuit within health, education and social service agencies" (Andrews & Bonta, 2010, p. 51).

Our findings indicate a significant association between participation in the BC PPOM project and reduced recidivism among participants. Members of the cohort reduced their overall offending by over 40% during the first year follow-up period. These results reinforce recent findings in similar UK-based initiatives; however they must be interpreted cautiously pending the implementation of an experimental trial.

Limitations

This study constitutes a preliminary examination of the British Columbia PPOM pilot, and our findings are subject to several limitations and restrictions. The absence of a comparison group and the use of a non-experimental design restrict our ability to infer a causal relationship between the PPOM program and the observed outcomes, including reduced offending among participants. The observed 40% decrease in offending cannot be solely attributed to the PPO intervention and may be due to other factors, including regression to the mean, (i.e., the phenomenon of "averaging out" in statistics). Although researchers in other jurisdictions have also found similarly promising outcomes associated with PPO programs, they too have encountered important limitations. There is consensus that more rigorous trials are required (Dawson & Cuppleditch, 2007; Merrington, 2006; Worrall et al., 2003).

References

- Andrews, D. & Bonta, J. (2010). Rehabilitating Criminal Justice Policy and Practice. *Psychology, Public Policy and Law, 16*(1), 39–55.
- Andrews, D. & Bonta, J. (2010). *The Psychology of Criminal Conduct.* New Providence, New Jersey: Matthew Bender & Company Inc.
- Axford, M. & Ruddell, R. (2010). Police-parole Partnerships in Canada: a review of a promising programme. *International Journal of Police Science and Management*, 12(2), 274–286.
- Bonta, J., Bourgon, G., Rugge, T., Scott, T., Yessine, A, Guutierrez, L. et al. (2011). An Experimental Demonstration of Training Probation Officers in Evidence-Based Community Supervision. *Criminal Justice and Behavior*, 38(11), 1127-1147.
- Brennan, S. & Dauvergne, M. (2011). *Police-reported Crime Statistics in Canada*, 2010. Retrieved on November 22, 2011 from http://www.statcan.gc.ca/pub/85-002-x/2011001/article/11523-eng.pdf
- Calverly, D. (2010). Adult Correctional Services in Canada 2008/2009. Retrieved on November 22, 2011 from http://www.statcan.gc.ca/pub/85-002-x/2010003/article/11353/tbl/tbl09-eng.htm
- Dawson, P. & Cuppleditch, L. (2007). An impact assessment of the Prolific and other Priority Offender programme. Retrieved on November 22, 2011 from http://library.npia.police.uk/docs/hordsolr/rdsolr0807.pdf
- Dehejia, R. & Wahba, S. (2002). Propensity Score Matching for Non-Experimental Causal Studies. *The Review of Economics and Statistics*, 84(1), 151-161.
- Drake, E., Aos, S. & Miller, M. (2009). Evidence-Based Public Policy Options to Reduce Crime and Criminal Justice Costs: Implications in Washington State. *Victims and Offenders*, 4, 173-196.
- Fox, C., Albertson, K. & Warburton, F. (2011). Justice Reinvestment: Can it Deliver More for Less? *The Howard Journal*, 50(2), 119-136.
- Marlow, A. (2007). An Evaluation of a Prolific Offender Project. Community Safety Journal, 6(2), 31-38.
- Mawby, R. & Worrall, A. (2004). Polibation revisited: policing, probation and prolific offender projects. *International Journal of Police Science and Management*, 6(2), 63–73.
- McConnaughy, E., DiClemente, C., Prochaska, J. & Velicer, W. (1989). Stages of Change in Psychotherapy: A Follow-Up Report. *Psychotherapy: Theory, Research, Practice, Training*, 26(4), 494–503.
- Merrington, S. (2006). Is More Better? The value and potential of intensive community supervision. *Probation Journal*, 53(4), 347–360.
- Millie, A. & Erol, R. (2006). Rehabilitation and Resettlement: A study of prolific offender case management in Birmingham, United Kingdom. *International Journal of Offender Therapy and Comparative Criminology*, 50(6), 691-710.
- Ministry of Public Safety and Solicitor General. (2010). A Profile of B.C. Corrections: Protect Communities, Reduce Offending. Retrieved on November 22, 2011 from: http://www.lumby.ca/doc/bccorrections2010.pdf
- Moore, R., Gray, E., Roberts, C., Taylor, E. & Merrington, S. (2006). Managing Persistent and Serious Offenders in the Community: Intensive Community Programmes in Theory and Practice. Portland, Oregon: Willan Publishing.
- Nash, M. (1999). Enter the polibation officer. *International Journal of Police Science and Management*, 1(4), 360-368.

- Pottruff, K. (2010). Chronic Offenders Literature Review. Retrieved on November 22, 2011 from
 - http://www.solgps.alberta.ca/safe_communities/community_awareness/2010%20Chr onic%20Offenders%20Practitioners%20Conference%20Do/Chronic%20Offenders%20 Literature%20Review%20January%202010.pdf
- Public Safety Canada and Alberta Solicitor General. (2010). Federal/Provincial/Territorial Chronic Offenders Practitioner's Conference: Summary Report. Retrieved on November 22, 2011
 - http://www.solgps.alberta.ca/safe_communities/community_awareness/2010%20Chr onic%20Offenders%20Practitioners%20Conference%20Do/Chronic%20Offender%20Report.pdf
- Roberts, C. (2005). Displaying Effectiveness: An Evaluation Report on the IRIS Project.

 Retrieved on November 22, 2011 from http://www.gos.gov.uk/497648/docs/300069/769085/EvaluationReportIRISProject
- Vennard, J. & Pearce, J. (2004). Bristol Prolific Offender Scheme: An Evaluation. Retrieved on November 22, 2011 from http://www.bristol.ac.uk/law/research/centres-themes/offender/execsum.pdf
- Worrall, A. (2001). Prolific Offender Projects a new route to public protection? *Criminal Justice Matters*, 46, 22-23.
- Worrall, A., Dunkerton, L. & Leacock, V. (2002). Targeting and Treatment? Do Prolific Offender Projects Have a Future? *Probation Journal*, 49(4), 287–296.
- Worrall, A. & Mawby, R. (2004). Intensive projects for prolific/persistent offenders. In Bottoms, A., Rex, S. & Robinson, G. (Eds.), *Alternatives to Prison: Options for an Insecure Society* (pp. 268-289). Portland, Oregon: Willan Publishing.
- Worrall, A., Mawby, R., Heath, G. & Hope, T. (2003). *Intensive Supervision and Monitoring Projects*. Retrieved on November 22, 2011 from http://library.npia.police.uk/docs/hordsolr/rdsolr4203.pdf