

Measuring Preventative Spend

Cost Benefit Worked Example 2 – Reduced Offending Behaviour

Example 2 is taken from the “Analysis of the costs and benefits of the Glasgow Persistent Offender Project” (POP) published in 2010. Kind permission for reproduction of these calculations was given by the Glasgow Persistent Offender Project.

Background

The Persistent Offender Project (POP) is a community safety initiative delivered jointly by Glasgow Addiction Services and Strathclyde Police. It seeks to identify substance misusing persistent offenders where substance misuse is identified as one of the root of their offending. Persistent offenders are identified through effective information sharing and subsequently offered and encouraged to engage in intensive support and treatment through community based outreach. Over the three year period, 137 offenders were engaged. Project outcomes included:

- Participants have an improved quality of life
- Participants have improved health
- Participants spend less on illegal drugs
- Participants reduce offending behaviour

Only the cost-benefit in relation to ‘participants reduce offending behaviour’ will be calculated in this example; however a lengthier cost-benefit analysis could demonstrate the longer-term savings for the health service if the other outcomes were achieved.

Cost Calculations

“Overall we estimate that each spend of £1 leads to benefits of up to £14 in the form of reduced economic and social costs of crime.”

The above figure was calculated by following these steps:

- 1 The change in offending behaviour of the average participant (number of offences pre- and post-POP);
- 2 The economic and social costs of this offending and hence any savings from its reduction;
- 3 The costs of the project, and;
- 4 The programme costs are then compared to the savings from reduced crime to estimate the net benefits of POP.

Step 1: The change in offending behaviour of the average participant (number of offences pre- and post-POP).

The number of offences before the initiative and after the initiative for each participant was calculated, and an average taken for the group.

each participant

Table 2: Number of recorded crimes and estimated actual incidence, before and after intervention

Offence category	Recorded crime			Estimated incidence		
	Pre-POP	Post-POP	Change	Pre-POP	Post-POP	Change
Non-sexual violent crimes	30	29	-3%	133	125	-6%
Crimes of indecency	232	112	-52%	277	134	-51%
Crimes of dishonesty	1,456	823	-43%	137,408	83,526	-39%
Fire-raising, vandalism etc	28	19	-32%	335	227	-32%
Miscellaneous offences	702	637	-9%	1,295	1,157	-11%
Other crimes	361	293	-19%	361	293	-19%
Total	2,809	1,913	-32%	139,809	85,463	-39%

Table 2 shows 39% reduction in estimated incidence of offending post initiative.

Assumptions:

- 1 This analysis assumes that offending levels would have remained at their average pre-POP comparison period level had there been no intervention. In reality, it could be the case that offending behaviour would have continued to get worse without engagement rather than remain stable, or alternatively that by the very nature of targeting persistent offenders these individuals may have already been at the peak of their offending levels and would have fallen naturally without intervention.
- 2 The difference between 'recorded crime' and 'estimated incidence' is explained more fully in the initiative evaluation, but essentially the 'estimated incidence' (taken from the Scottish Crime and Justice Survey) is more accurate than recorded crime figures. This is because not all crime that happens is reported to police.

Step 2: The economic and social costs of this offending and hence any savings from its reduction.

Use the average cost per offence given in the toolkit to estimate the total costs of offences by offenders prior to and after the programme. For example for Breach of the Peace offences:

Pre-project the 137 offenders were involved in 273 offences at an average cost of £2,071 per offence.

$$\begin{aligned} &\text{The number of offences (273) X Average cost per offence (£2,071)} \\ &= \text{Total cost of Beach of the peace offences (£565,558)}. \end{aligned}$$

The same calculation is performed for post-project Breach of the peace offences giving a total of £511,695 (247 offences post-project X £2,071).

This was carried out for ALL associated offence types using the costs within the toolkit, giving the following table.

- Columns A to D- are the number of pre-project and post-project offences committed by the 137 offenders.
- Column E -is the cost of the pre-project offending (number of offences from column A or C X average cost of each offence).
- Column F -is the cost of the post-project offending (number of offences from column B or D X average cost of each offence).

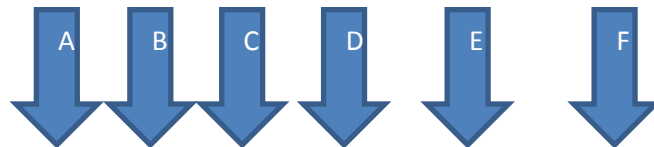


Table 3: Economic and social costs of crime, before and after intervention (£2009)

Crime/offence group	Scotland crime/Offence name	Pre POP: recorded offences	Post POP: recorded offences	Pre POP: estimated incidence	Post POP: estimated incidence	Pre POP Cost (2009£)	Post POP Cost (2009£)
Non-sexual violent crimes	Serious assault	2	5	8	19	191,737	479,341
	Robbery and assault with intent to rob	13	10	67	52	565,489	434,992
	Other non-sexual crimes of violence	15	14	58	54	540,769	504,718
Crimes of indecency	Rape & attempted rape	1	0	8	0	751,827	0
	Indecent assault etc	1	1	9	9	270,994	270,994
	Other crimes of indecency	230	111	259	125	536,341	258,843
Crimes of dishonesty	Housebreaking – dom dwelling	23	13	152	86	573,833	324,340
	Housebreaking – dom non-dwelling	14	0	122	0	416,688	0
	Housebreaking - other	28	19	243	165	833,375	565,505
	Theft by OLP (exc mv)	22	4	181	33	132,207	24,038
	Theft by OLP from a motor vehicle	83	41	1,091	539	1,079,630	533,311
	Theft from mv not classified elsewhere	16	6	210	79	208,121	78,046
	Theft of a motor vehicle	18	7	44	17	209,778	81,580
	Attempted theft of a motor vehicle	11	1	56	5	32,800	2,982
	Theft by shoplifting	1,041	638	133,742	81,967	16,935,554	10,379,331
	Theft not elsewhere classified	92	35	1,332	507	974,482	370,727
Other crimes of dishonesty	108	59	235	129	172,202	94,073	
Fire-raising, vandalism etc	Fire-raising	1	0	12	0	12,260	0
	Vandalism	23	17	275	203	274,278	202,727
	Other malicious mischief offences	4	2	48	24	47,701	23,850
Miscellaneous offences	Minor assault	70	60	372	319	2,489,905	2,134,204
	Minor assault of an emergency worker	29	26	320	287	532,294	477,229
	Breach of the peace	273	247	273	247	565,558	511,695
	Drunkenness	22	14	22	14	45,576	29,003
	Other miscellaneous offences	308	290	308	290	638,066	600,776
Other crimes	Crimes against public justice	91	81	91	81	188,519	167,803
	Handling an offensive weapon	58	21	58	21	120,155	43,504
	Drugs	198	183	198	183	410,185	379,110
	Other crimes	14	8	14	8	29,003	16,573
Total		2,809	1,913	139,809	85,463	£29,779,326	£18,989,296

The calculations show that:

A 39% fall in the estimated actual incidence of offences (Table 2) equates to a 36% reduction in the associated costs of crime (based on Pre- Project cost of crime of £29,779,326 and Post project cost of crime of £18,989,296)

For each offender this is £317,367 pre-project (£29,779,326 / 137 offenders)
£138,608 post-project (£18,989,296 / 137 offenders)

Rounding this up the pre-project cost of crime involving these offenders was approximately £30 million and the post-project cost of crime involving these offenders was approximately £19 million – a decrease of just under £11million (£10,790,030). (£320K per offender pre-project compared to £140K per offender post-project – £180K savings per offender).

Step 3: The costs of the project.

The annual operating expenditure is **£254,540** (£763,620 over the three year evaluation period).

Step 4: The programme costs are then compared to the savings from reduced crime to estimate the net benefits.

Subtract the programme costs of from the savings in reduced offending to get the social net benefit of the programme over the evaluation period.

Table 5: Key findings from cost benefit analysis (£2009)

Savings in the economic and social costs of crime	£10,790,030
Operational expenditure	£763,620
Net benefit	£10,026,410
Benefit-cost ratio	14.1:1

Total net benefit (over the three year period) = £10,790,030 - £763,620 = **£10,026,410**

Per offender over the three year period this equates to £73,185 (£10,026,410 total net benefit / 137 offenders).

Annually this equates to: £3,342,136 net benefit or £24,395 per offender per year.

The benefit-cost ratio means that for every £1 spent on the project, there is a £14 benefit to society in the form of reduced offending:

£763,620 operational expenditure : £10,026,410 savings

£1: £13.1 (doing all the calculations with the rounded up figures makes this £14).

Cost Benefit Information

Worked Example	Reducing Offending Behaviour
Category / Topic	Offending
Date Produced	June 2013

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