

## Measuring Preventative Spend

### Cost Benefit Worked Example 1 – Emergency Hospital Admissions

Example 1 is based loosely on the “New drug trend awareness programme” within the Scottish Borders, although some dates have been changed for the purposes of the worked example. This example covers the behaviour of the wider population. Kind permission for reproduction of these calculations was given by the Scottish Borders Community Safety Partnership.

#### Background

Over the previous two years a new generation of Novel Psychoactive Substances (NPS), sometimes known as ‘legal highs’, had become widely available across Scotland and more locally in the Scottish Borders.

Up until 2010 there were no incidents involving NPS that had come to the attention of the local partnerships, however during 2011 there were 25 admissions to the Borders General Hospital where patients had admitted taking NPS. Staff from drug and youth services also raised a need for additional information about these new substances. Project outcomes included:

- Frontline staff are aware of the health risks and legislation concerning NPS
- Young people are aware of the health risks and legislation concerning NPS
- Emergency hospital admissions resulting from NPS use are reduced

Only the cost-benefit in relation to ‘Emergency hospital admissions’ is used in this example calculation.

#### Step 1 - Cost Calculations

Using the costs from the online SCSN toolkit, twelve cases of NPS use were assessed to determine an average cost-per-case. Some of these costs may not be present in each case; however one should seek to calculate the average cost of a case based on a range of cases. The below calculation is a shortened example.

| Case No.            | Ambulance call out (£) | A&E attendance (£) | Inpatient stay (£)  | Criminal justice proceedings (£) | Total (£)   |
|---------------------|------------------------|--------------------|---------------------|----------------------------------|-------------|
| 1                   | 244                    | 104                | 569                 | n/a                              | 917         |
| 2                   | 244                    | 104                | 569                 | n/a                              | 917         |
| 3                   | 244                    | n/a                | n/a                 | 2148                             | 2392        |
| 4                   | 244                    | 104                | n/a                 | n/a                              | 348         |
| 5                   | 244                    | 104                | 1138 (2 nights@569) | n/a                              | 1486        |
| <b>Average cost</b> | <b>244</b>             | <b>104</b>         | <b>569</b>          | <b>2148</b>                      | <b>1212</b> |

The average cost of an NPS case is **£1212**.

Based on the average cost of a case, NPS incidents in 2011 cost the Scottish Borders:

$$\text{Average cost (£1212)} \times \text{No. of cases (25)} = \text{Total cost in 2011 (£30,300)}$$

This doesn't include additional impact such as non-attendance at school/work or any longer-term health consequences, but goes some way to indicate costs involved in community safety issues.

During 2012, and 2013 to date in this hypothesised example, there has been only 1 legal high incident i.e. a cost of **£1212** in 2012 and 2013.

### Step 2 – The costs of the initiative

The initiative cost £6,500.

### Step 3 – The benefits

To calculate the savings use the following calculation (based on the assumption of the same number of NPS cases in 2012 if the initiative hadn't gone ahead).

$$[\text{Pre-initiative cost (£30,300)} - \text{Post-initiative cost (£1212)}] - \text{Initiative cost (£6500)} = \text{Savings of £22,588}$$

The Cost benefit ratio can be calculated by dividing the savings by the initiative cost:

For every £1 spent on the initiative there were savings of £3 (£22588 savings / £6500 initiative cost)

$$\text{Cost benefit ratio} = \text{£1: £3}$$

### Cost Benefit Information

|                  |                               |
|------------------|-------------------------------|
| Worked Example   | Emergency Hospital Admissions |
| Category / Topic | Drugs                         |
| Date Produced    | June 2013                     |

### For more information, contact:

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