



Home Office

# Violence Reduction Units – Impact evaluation feasibility study

## Summary report for VRUs and wider stakeholders

Research Report 117

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# 1. Introduction

In September 2019 the Home Office commissioned Ecorys, in partnership with Ipsos MORI and the University of Hull, to undertake an impact feasibility study and a process evaluation of Violence Reduction Units (VRUs). The process evaluation focused on gathering learning from the implementation phase of VRUs, including the enablers and challenges, and emerging outcomes. **This briefing paper focuses on the key findings from the impact feasibility assessment.**

This briefing paper, which is **intended for VRUs and wider stakeholders interested in measuring the impacts of a whole systems approach** to reduce violence, provides a summary of the key findings. This briefing paper should be read alongside the [Process Evaluation of the Violence Reduction Units](#),<sup>1</sup> and [interim guidance](#) produced by the Home Office.<sup>2</sup>

## 1.1 Policy background

In the summer of 2019, the Home Office announced that 18 police force areas would receive funding to establish (or build upon existing) VRUs. The areas selected were based on the levels of serious violence experienced between 2015/16 and 2017/18.

The VRU core aim is to provide leadership and strategic coordination of all relevant agencies, to support a public health approach to tackle serious violence and its root causes. As policy developed during the first year of VRUs, there was a **shift in the terminology used from a ‘public health approach’ to a ‘whole systems approach’**. Alongside the VRU core function, each police force area is required to fund specific interventions working with young people (aged under 25). **The same 18 police force areas also receive surge funding.** Surge funding aims to reduce violence but is focused on enforcement.

Key aspects of the whole systems approach, as summarised by the Home Office,<sup>3</sup> include:

1. **working with and for communities, unconstrained by organisation or professional boundaries;**
2. **focusing on a defined population; and**
3. **comprising short- and long-term solutions.**

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<sup>1</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/909913/process-evaluation-of-the-violence-reduction-units-horr116.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/909913/process-evaluation-of-the-violence-reduction-units-horr116.pdf)

<sup>2</sup> **Home Office** (2020) *Violence Reduction Unit Interim Guidance*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/876380/12VRU\\_Interim\\_Guidance\\_FINAL\\_003\\_2732020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/876380/12VRU_Interim_Guidance_FINAL_003_2732020.pdf)

<sup>3</sup> Ibid

Additional hallmarks of the public health approach are the need for **data and intelligence** to understand the pattern of serious violence experienced by the population and **evidence of effective approaches** to respond to the problem. These reflect both the internal monitoring and reporting required of VRUs and the external, independent evaluation of VRUs.

In this context, VRUs had three specific outcome measures to achieve:

1. reduction in hospital admissions for assaults with a knife or sharp object and especially among victims aged under 25;
2. reduction in knife-enabled serious violence and especially among victims aged under 25; and
3. reduction in all non-domestic homicides and especially among victims aged under 25 involving knives.

## 1.2 Impact feasibility study aims and approach

The aim of the impact feasibility study was to identify appropriate methods to measure the impact of VRUs in the future. This included consideration of:

1. the combined impact of all VRU activity (i.e. the VRU core function and interventions supporting young people) on youth violence at a population level; and
2. the impact of specific interventions at the individual level on youth violence and associated risk factors.

The study involved three interconnected phases.

1. **Desk review:** A review of relevant documentation leading to the **development of a Theory of Change (ToC)** for each VRU based on collaboration with VRU members (see below). The ToCs identified the inputs (for example, financial, existing partnership arrangements) and the activities, both whole-system focused and interventions, which VRUs are undertaking and mapped these to the anticipated outcomes/impacts. Based on these VRU-level ToCs, **a programme-level ToC was developed identifying common elements across all VRUs.**
2. **Primary research: Consultations with the VRU leads** were conducted to understand more about how VRUs had been designed and the types of data being (or intended to be) collected. The consultations also provided an opportunity to discuss and finalise the ToCs. The VRU leads were asked to complete/disseminate a **short online form to collect details on the specific interventions** being funded through VRUs.
3. **Assessment:** Based on the VRU design, anticipated outcomes and potential data sources, **assess different evaluation options.** This included consideration for the overall impact of VRUs and specific interventions. Recognising the complexity of VRUs

and the issues that they seek to address, consideration was paid to both quantitative and qualitative techniques.

The distinction between, and importance of, programme- and intervention-level impact evaluation is summarised in the box below.

**Box 1.1: Programme-level versus intervention-level impact evaluation**

**Programme-level** impact evaluation aims to estimate the overall impact of VRU activity, including the combined impact of funded interventions, on the target population. Programme-level impact evaluation is required to understand **whether, and to what extent, VRUs have an impact.**

**Intervention-level** impact evaluation seeks to identify interventions within VRUs that are effective with specific groups of individuals receiving support. Intervention-level impact evaluation has an important role in **developing the evidence base** and, potentially, informing the direction of VRUs when designing/commissioning interventions in the future.

This briefing note presents the findings of the impact feasibility study in subsequent chapters as follows:

1. **VRU design** including the programme-level ToC and its relevance to evaluation; and
2. key findings for **assessing the impact of VRUs.**

## 2. Violence Reduction Unit design

The overarching aim of VRUs is to provide leadership and strategic coordination of all relevant agencies, to support a 'whole systems' approach to tackle serious violence and its root causes.

Figure 2.1 depicts a (whole) programme-level Theory of Change (ToC) for Violence Reduction Units (VRUs), which was developed through analysis of the individual ToC for each VRU. The programme-level ToC provides:

1. a high-level summary of the common inputs and activities being utilised/undertaken by VRUs; and
2. the anticipated outputs, outcomes and ultimate impacts of these.

The programme-level ToC serves as a cornerstone for the impact evaluation feasibility assessment. It enables **consideration of the outcomes relevant to the VRU, where impact should be investigated, and the context/mechanisms that facilitate these outcomes.** The arrows connecting different elements of the ToC indicate causal pathways.

**All elements of the ToC are underpinned by the public health/whole systems approach** summarised in Chapter 1.

In the context of evaluating and developing the evidence base around VRUs, the ToC highlights that multiple and interconnected activities are required to meet the VRU aims. Whilst this presents some complexities for assessing the impact of VRUs, it also provides the opportunity to **explore the contribution of different elements – enabling the refinement of the VRU strategy based on hard evidence.**

In terms of inputs, all VRUs were subject to funding from the Home Office. **All VRUs are seeking to harness and build on existing partnerships**, for example, Community Safety Partnerships (CSPs) and Safeguarding Boards that are in place locally. Four of the VRUs are building on a VRU that existed before Home Office funding. **Existing initiatives and interventions also feature in the VRU design.** Given the prevalence of violence and crime locally, work to tackle this was already underway; in accordance with the policy intent the VRU, as a strategic body, is driving these efforts through coordinated leadership and support.

In terms of structure, VRUs comprise strategic oversight/direction (in the form of a board) and an operational/delivery team, responsible for implementing VRU activities. **All VRUs are working closely with existing partnerships and local organisations to account for differing local issues and context** in the approaches they adopt and the interventions they commission to support local young people/adults. **The VRU structure and partnerships are in line with the whole-systems principle for the VRUs not to be constrained by organisational and professional boundaries.**

A core activity for VRUs is to enable enhanced data sharing and undertake analysis to develop a Problem Profile/Strategic Needs Assessment and, ultimately, a Response Strategy to this.

The Problem Profile/Strategic Needs Assessment is intended to **enhance the understanding of the individuals who are at risk and what the drivers of violence are, at a local level.** From a supply perspective, the Problem Profile/Strategic Needs Assessment will map what support is available locally and identify gaps in provision. As such, the **Problem Profiles/Strategic Needs Assessments are data driven and support the VRU approach to be evidence based.** Many VRUs intend to treat the Problem Profiles/Strategic Needs Assessment as a live document (regularly being updated to reflect the evolving nature of violence/risks). Combined with the Response Strategies, the Problem Profiles/Strategic Needs Assessments provide:

1. an understanding of violence and its drivers locally; and
2. a shared vision and plan to address this.

**VRU activities focus directly on individuals and local communities**, including:

1. specific interventions working with children, young people/adults (the target population); and
2. engagement and communication strands.

**Existing interventions are being funded to expand their geographical reach and/or target groups, and interventions new to the area are also being supported.** The focus of interventions that are being supported by VRUs is wide ranging. Most interventions can be considered preventative or reactive and **targeted, based on individual or geographic characteristics** (for example, violence hot spots).

Engagement with local communities seeks to achieve representation from a wide range of groups to ensure that **the VRU approach is with and for communities.** In many cases, this includes supporting community-based organisations to increase their capacity and provide funding so that they can directly commission local interventions. The process evaluation also highlights that as VRUs develop, communities will be more involved in the co-design and co-delivery of VRU activities.

In terms of outputs, **the strategic role of VRUs** is anticipated:

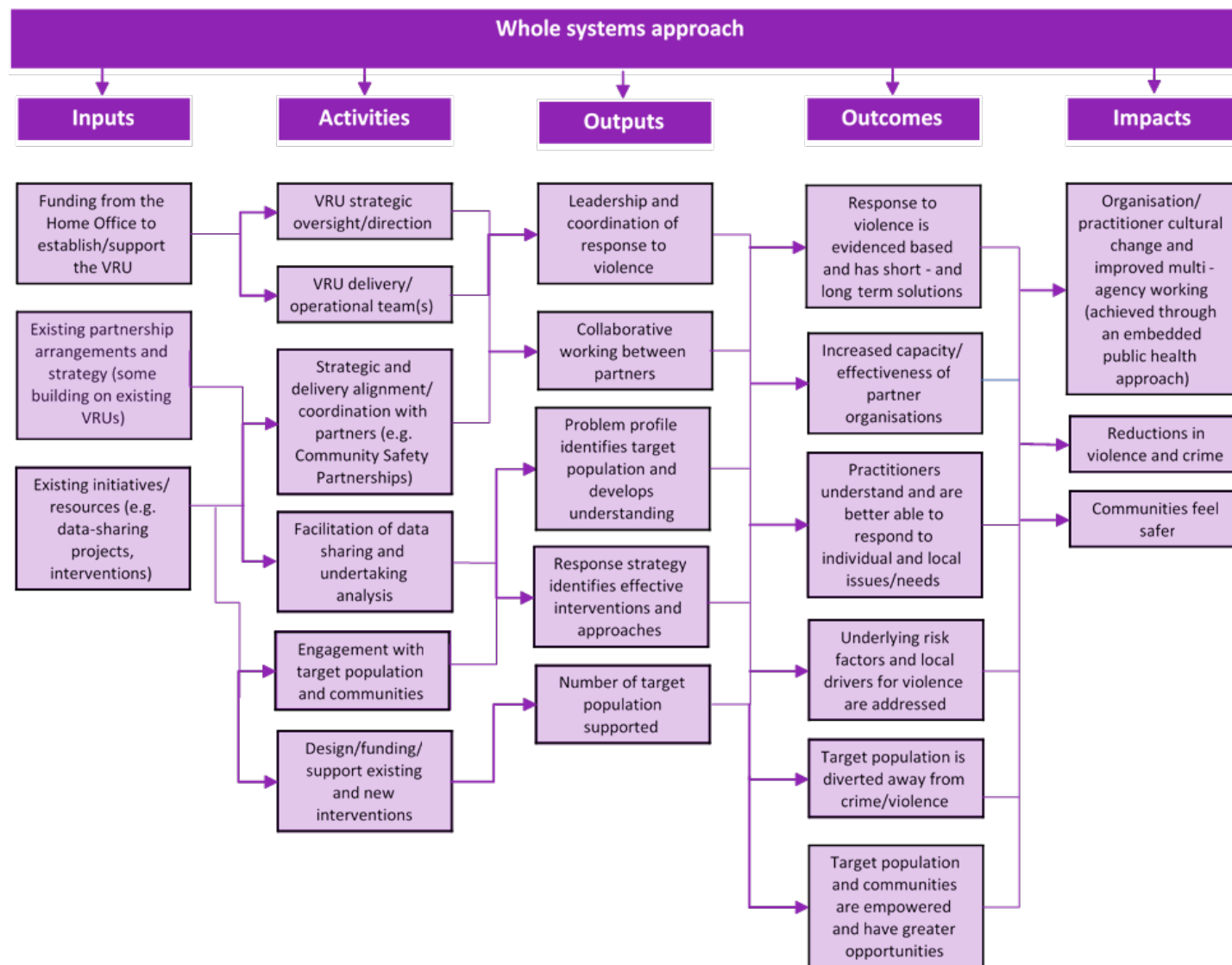
1. to provide leadership and coordination in the local response to violence;
2. to foster collaborative working between partners; and
3. to enhance the understanding of those who are at risk.

These outputs are intended to lead to **an evidence-based approach to violence**, which comprises **both long- and short-term solutions**, and builds the capacity and effectiveness of partner organisations and practitioners. **Regarding interventions**, VRUs will support the development of effective support and increase the number of individuals able to access this. Through this work, **individuals will receive support that addresses their underlying needs and diverts them away from violence.**

**The impacts (or longer term outcomes) of VRUs can be considered a cumulation of all strategic and intervention-based activities undertaken. The impacts included an organisation and practitioner culture change and improved multi-agency working, reductions in violence and communities feeling safer.**



Figure 2.1: VRU programme-level Theory of Change



# 3. Assessing the impact of Violence Reduction Units

This chapter summarises the key findings from the impact feasibility study, which have informed the commissioning of the national evaluation (focused on programme-level impacts). The findings provide an indication of what Violence Reduction Units (VRUs) can expect from the national evaluation (including a collaborative approach and potential data requirements) and can inform their own evidence generation at a programme level and intervention level. The latter is a focus of local evaluations being led by VRUs.

## 3.1 Programme-level impact evaluation

There were three key findings from the impact feasibility assessment at a programme level.

1. Outcomes focused on **reductions in violence at a population level** (within each VRU) are an appropriate measure of the cumulative impact of VRU activity and are amenable to impact evaluation. Routinely collected quantitative data on outcomes of interest include the following.
  - **Hospital admissions for assaults with a knife or sharp object.** This is the same indicator that was used as a basis for the allocation of VRU funding. These data are available by police force area and month by special request and approval from the NHS.
  - **Police recorded violence with injury crime.** This indicator captures all types of violence with injury (not just knife-enabled) and can be considered an appropriate outcome measure for VRUs. These data are available by police force area and month by special request and approval from the Home Office.
  - **Police recorded offences involving a knife or sharp object.** Drawing on the same source of violence with injury crime (above), this indicator captures crime flagged by the police as involving a knife or sharp object. However, it is understood that there is heterogeneity, both within police forces areas over time and between different police force areas, on the use of this flag.
  - **Police recorded non-domestic homicides.** This indicator captures non-domestic homicides by police force area.

The feasibility study recommended that any future programme-level impact evaluation should review the Problem Profiles/Strategic Needs Assessments developed by VRUs and involve collaboration with VRU analysts to **identify other outcomes and potential sources**. For example, through aggregation of data from the Police National Computer (PNC) or local systems, it should be possible to home in on particular offence types and/or first-time offences for under 25s.

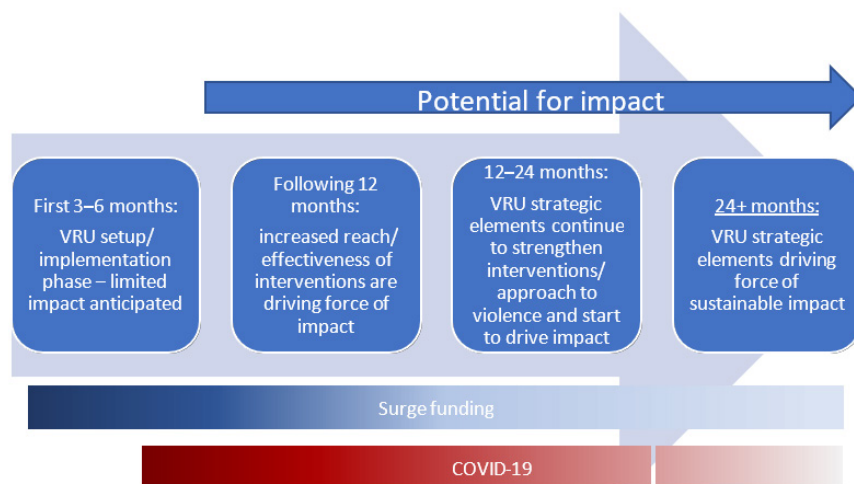
Individual-level data are not essential to measure the impact of VRUs at the programme level. The outcomes detailed above, some of which were tested as part of the impact feasibility study, were aggregated counts. Data can be aggregated at different levels, for example monthly,

quarterly and annually, with different statistical methods available to analyse these. Whilst there are some advantages to more granular aggregation (for example, monthly) such as capturing more nuanced trends over time, there is a requirement to balance this with sample sizes. For example, monthly counts of non-domestic homicides are unlikely to show a reliable/meaningful trend and are perhaps best examined with annual data.

2. Recognising the overarching whole systems approach, including a focus on prevention, **the anticipated impact of VRUs is most likely to be gradual and accumulate over time.** Following the implementation period of VRUs, it is anticipated that the impact will initially reflect the increased scale of interventions across the police force area. As time goes on, the strategic elements of VRUs will have an increasing/compounding effect on the impact. This timeline is illustrated in the diagram below. Note, three to six months to establish VRUs has been assumed but it is recognised that some elements will take longer to operationalise and VRUs are at different stages in their development. The earliest initial signs of impact are anticipated in the 12 to 24 month period.

The outcomes of interest are also likely to be affected by surge fund activity and this may be considered the driving force of impact initially. Over time, it is anticipated that **the balance of impact will shift towards the preventative activity of VRUs** – rather than the enforcement activity associated with surge funding. The impact feasibility study identified the potential means to isolate the impact of VRUs from that of surge funding, including both statistical and theory-based approaches. **Note that at the time of writing, March 2020, it was unknown when the impacts from COVID-19 (for example, changes in crime trends and the delivery of interventions) and surge funding will end.**

**Figure 3.1: VRU timeline for potential impact**



In line with existing evidence, it is anticipated that the full impact of VRUs will take several years to materialise. Using the Scottish VRU as a benchmark, homicides were reduced by half and hospital admissions from injury with a sharp object fell by 62%, but this was over a 10-year

period.<sup>4,5</sup> From a public health perspective, **VRUs are aiming to change how violence and its drivers are identified, perceived (by practitioners and organisations), and addressed** – this will take time to achieve. However, through asking appropriate questions and a combination of quantitative and qualitative techniques, VRU progress is measurable and early signs/indicators of impact will be detectable sooner.

3. It is important to consider what is a **realistic impact for VRUs to achieve**. This will help to ensure that any future impact evaluation asks the appropriate research questions at different points in time. The youth violence/crime landscape is complex, with variation in the nature and drivers of this between and within police force areas. A sudden impact or even a simple linear downward trend on the youth violence following the formation of VRUs is unlikely – **there is potential for periods of levelling-off and even ‘negative’ outcomes** (for example, following the easing of COVID-19 lockdown measures or changes in criminal activity) that the programme-level impact evaluation will need to consider. Research questions that could be considered include, but are not limited to, the following.

- Following the easing of lockdown measures, did trends in youth violence return to pre-VRU levels?
- Following any initial impacts from surge fund activity (which are anticipated to occur before impacts that are attributable to VRUs), are VRUs able to sustain this impact?
- In the early years of VRUs where there was a pre-VRU upward trend in youth violence, are things getting any worse or has there been a levelling-off effect?

The impact feasibility study identified interrupted time series analysis and a panel data approach (often referred to as multilevel modelling) as the most appropriate statistical techniques to capture the anticipated cumulative impact of VRUs.<sup>6</sup> These techniques are able to model outcome trends before and after the introduction of VRUs and compare these against non-funded areas. Non-funded areas will be selected based on their similarity to funded areas and/or using synthetic control groups.<sup>7</sup> Further analysis will aim to separate the VRU impact from other interventions (for example, surge funding) though differences in timing and/or using indicators of other activity (for example, law enforcement activity such as stop and search to control for separate surge funding impacts).

In addition to statistical analysis, complementary research activity (for example, interviews with key stakeholders, surveys of young people, triangulation of data) are **essential to capture the context in which VRUs are operating** and understanding ‘how’ and ‘why’ – not just ‘what’ – impacts occur.

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4 It should also be noted that over the same time period, there was a decline in violence in other parts of the UK, without the presence of a VRU.

5 <http://researchbriefings.files.parliament.uk/documents/CDP-2018-0274/CDP-2018-0274.pdf>

6 Further detail on interrupted time series (and synthetic control groups) is provided in the Magenta Book (Annex A), accessible here: <https://www.gov.uk/government/publications/the-magenta-book>. For panel data/multilevel modelling, a useful overview and explanation is provided by **Sommet and Morselli** (2017) here: <https://www.risp-irsp.com/articles/10.5334/irsp.90/> or **Buxton** (2008) at <http://www.statstutor.ac.uk/resources/uploaded/multilevelmodelling.pdf>

7 Synthetic control groups create an artificial force, which is comparable to funded areas, by drawing on smaller areas (for example, local authorities, neighbourhoods) from multiple non-funded areas.

## 3.2 Intervention-level impact evaluation

The three key findings from the impact feasibility assessment at the intervention level were:

1. There are **a wide range of interventions with different focus, approach, intended target groups and outcomes of interest being supported by VRUs**. Table 3.1 details the number of interventions funded (for 14 VRUs), by target group.<sup>8</sup> **Target groups are a useful way to consider different interventions and respective evaluation strategies**. For example, whilst there are varying approaches to support for young people already involved in crime/violence (level 4), there are commonalities in outcomes (for example, reoffending), and comparator groups can often be identified in administrative data. Typically, universal (level 1) support is less amenable to quantitative impact evaluation due to a focus on outcomes that require primary data collection for large groups (for example, entire schools/communities) of young people. Also comparator groups can be difficult to identify/engage in primary data collection. It is important to note that **an interventions amenability to impact evaluation is not a measure of its quality or benefit to young people** – these interventions are just better evaluated through other techniques such as qualitative research with young people to understand their reasons for engagement and perceptions of support provided.

Target group	Description	Number of interventions	Percentage
Level 4: Involved in crime/violence	Individuals exhibit known risk factors and are involved in the criminal justice system – they are <b>known to the police and other services</b> . Aim is to prevent further crime/violence and address underlying issues.	35	20%
Level 3: Known risk/to services	Individuals presenting risk factors, including adverse childhood experiences, and are suspected to be involved in criminal/violent activity – they are <b>known to services and potentially the police</b> . Aim is to prevent crime/violence and address underlying issues.	48	27%
Level 2: Potentially high risk	Individuals are at a high risk of child criminal exploitation/victimisation due to their proximity to hot spot areas and/or the individuals/ groups they are associating with. <b>Known to services through their location only</b> . Aim is to reduce risk.	51	29%
Level 1: Universal	Individuals have no known involvement in violence/crime. They may live (or attend school) in an area with high levels of socio-economic deprivation and/or crime. <b>Unknown</b>	34	19%

<sup>8</sup> Data were not available in time for the Bedfordshire, Essex, West Midlands and South Wales VRUs

	<b>directly to services.</b> Aim is to increase awareness of the risks.		
Other	Interventions targeted at professionals. For example, trauma informed training.	7	4%
<b>Total</b>		<b>175</b>	<b>100%</b>

**Table 3.1: Number of interventions supported by VRUs, by target group**

Note: Percentages do not sum to 100 due to rounding.

2. Multiple interventions were identified as theoretically amenable to quantitative impact evaluation. The approach to identified interventions followed an initial set of 'hard' criteria and then case-by-case assessment against guiding principles. Hard criteria included the following.

- **Is the intervention supporting enough individuals to allow for reliable statistical analysis?** Whilst interventions working intensely with small groups (particularly those at a high risk) can be evaluated by other means, it is challenging to estimate a quantitative measure of impact with small sample sizes.
- **Is the intervention collecting individual-level data for those it supports?** The collection of baseline and follow-up data, and/or the ability to link individuals supported to administrative data, increase the available evaluation options and robustness of results.

Interventions meeting the above criteria were then assessed based on the following guidelines.

- **Is the treatment group well-defined? How are individuals allocated to treatment?** Without a well-defined treatment group and an understanding of how individuals are identified/eligible for an intervention, it will be difficult to identify a reliable comparator group.
- **Are the anticipated outcomes realistic for the intended target groups? And over what timeframe are the outcomes anticipated to materialise?** This will support the attribution of any impacts observed to the intervention.
- **Can the impact be attributed to VRUs?** And/or are there significant co-interventions (funded or not by the VRU) that have a stronger attribution claim?

3. **Ideally, interventions should be assessed for their amenability to impact evaluation on an ongoing basis.** The data collection for interventions and subsequent assessment above was undertaken in late 2019. This was an early stage in VRU development with many still in the process of designing/commissioning interventions. Furthermore, many VRUs were in the process of devolving funding to Community Safety Partnerships (CSPs) and/or community groups to commission interventions at a local level. It is understood that many more interventions (than those detailed in Table 3.1) are being supported by VRUs, and, following the development of Problem Profiles/Strategic Needs Assessments (March 2020) interventions could be realigned to support the issues identified.

Based on the interventions identified as amenable to impact evaluation, the feasibility study recommended comparing the outcomes of those supported by interventions with comparator groups. Comparator groups should have similar background characteristics to those supported. Methods such as propensity score matching can help to form comparator groups.

### 3.3 Summary recommendations and next steps

At the programme level, a combination of quantitative methods (interrupted time series and a panel data approach), and complementary research to capture the wider context and understand ‘why’ and ‘how’ impacts occur, is the most appropriate way to assess VRU impact. The programme-level evaluation will be conducted by a national evaluator that will work closely with VRUs to ensure that the analysis is appropriately framed, and that qualitative insights and additional data/evidence are captured.

At the intervention level, comparing the outcomes between those supported by VRU interventions and comparator groups is possible. Methods such as propensity score matching should be considered. The feasibility study identified multiple interventions that are amenable to impact evaluation. Where new interventions have since been commissioned, Home Office local evaluation guidance can be used to help to assess their amenability to impact evaluation. The national evaluation could support VRUs and their local evaluators with this assessment.

A coordinated approach between the national and local evaluations can support VRUs to develop the evidence base around what works for the young people/adults they support and inform the development of an effective whole systems approach.

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