The Health Foundation

NHS
Nottingham University Hospitals
NHS Trust

Redthread YVIP Adoption and Spread

Final Report December 2020

Redthread

The Redthread Youth Violence Intervention Programme: An evaluation to assess the potential for spread and sustainability within the NHS emergency care system.

Final Report – December 2020

Circulation	• The Health Foundation • Redthread Leadership Team • NUH Emergency Department Executive • NUH Major Trauma Directorate • Project Evaluation Advisory Group
Authors	philip.miller@nuh.nhs.uk * amy.clark2@nuh.nhs.uk
The Health Foundation	Maria.kordowicz@kcl.ac.uk

* Corresponding author

Contents

1 Executive Summary 4
2 Introduction 9
2.1 Adversity-Related Injury in young people 9
2.2 Violence as a health issue 10
2.3 Current Emergency Department response to Adversity-Related Injury in young people 10
2.4 The development of the Redthread Youth Violence Intervention Programme 11
2.5 What the programme delivers 12
2.6 The Theory of Change 14
3 The "adoption and spread" evaluation 15
3.1 Aim 15
3.2 Set-up of the evaluation 16
3.3 Amendment 1 16
3.4 Methods 16
3.5 Theoretical basis for the evaluation 19
3.6 Evaluation Advisory Group (EAG) 23
4 Themes 24
4.1 Young people and their needs in ED 24
4.2 Introducing YVIPs into existing systems of care 36
4.3 Policy, evidential and regulatory landscape 48
4.4 The challenges of expansion and spread 54
4.5 Sustainability 59
5 Formative feedback 68
6 Limitations of the study 70
7 Conclusion 71
Appendix 1 Redthread YVIP "Theory of Change" 72
Appendix 2 Outline Interview Schedule 73
Appendix 3 "Adoption and Spread" Evaluation Protocol 74
Appendix 4 Evaluability Assessment 84
Appendix 5 NOMAD Questionnaire 89
Appendix 6 TIDieR template: YVIP 91

Glossary

ARI	Adversity-related injury – physical (or psychological) harm resulting from violence or exploitation
CI	Chief Investigator (relating to NHS Research authorisation)
DPIA	Data Protection Impact Assessments
EAG	Evaluation Advisory Group
ED	Emergency Department
GDPR	General Data Protection Regulations 2018
HRA	Health Research Authority
IDVA	Independent Domestic Violence Advocate
IG	Information Governance
ISTV	Information Sharing to Tackle Violence
MTC	Major Trauma Centre
PCC	Police and Crime Commissioner
PI	Principle Investigator (relating to NHS research authorisation)
QALY	Quality-Adjusted Life Year
VRU	Violence Reduction Unit
YVIP	Youth Violence Intervention Programme

NB: Data collection and much of the analysis for this report were completed prior to the emergence of Covid-19 and the dramatic societal changes that have ensued. The staff and leadership within Redthread, the NHS and the many other organisations involved in the care and support of young people had, rapidly and radically, to change their working practices and much else, to continue providing services.

We make no mention of these events and this may strike a strange note on reading the report in late 2020 when the pandemic still looms large. However, we hope that the majority of the findings and recommendations that we have included will remain pertinent and useful even as these services recover. In the coming year many new practices will be retained where there are tangible benefits such as increased responsiveness, access or inclusion. More importantly, the need for organisations to commit to shared goals, joint working and clear reporting of benefits that we highlight, will be all the greater.

1 Executive Summary

In recent years many cities in the UK have seen increases in violence and exploitation affecting young people. Poor social circumstances and previous adverse and abusive experiences place many young people at risk of repeated injury and of causing injury to others. After such crisis events, many young people will visit an Emergency Department (ED). This visit becomes an opportunity for staff to recognise the wider needs of the young person and try to intervene to help reduce the risk of future harm but many EDs lack the skills and resources to take this opportunity fully.

Some EDs have begun to use teams of specialist youth workers to take referrals from clinical staff and provide additional services to such young people. The "Navigator" ED youth service in Scotland was developed by the first UK Violence Reduction Unit (VRU)[1]. The VRU implemented a youth service in emergency care as an early priority[2] and embedded it within a wider network of community-based services[3,4].

Redthread, a youth charity, takes a similar approach. They have developed a Youth Violence Intervention Programme (YVIP) which works with young people in NHS Emergency Departments (ED) and Major Trauma Centres (MTC) in England. The broad aims of the intervention are shown in box 1.

Box 1 The Aims of the Youth Violence Intervention Programme

Provide support to Emergency Department teams to ensure a holistic approach is taken to tackling youth violence and exploitation, and its implications

Present pathways out of violence and exploitation for young people wanting to make positive changes in their lives

Promote and nurture partnership working across the system to join up the way in which local areas respond to youth violence and exploitation

Young people aged 11-24 are identified and supported as soon as possible after arrival in ED. Youth workers with specialist training conduct structured risk assessments and deliver individualised, practical and psychosocial support alongside the clinical care provided by NHS staff. The programme is based on a "theory of change" setting out how the intervention achieves positive outcomes. The intervention capitalises on the "teachable moment": the crisis and immediate aftermath is often the culmination of many circumstances and experiences but provides a valuable chance for change to begin. Youth workers help young people reflect on their vulnerability, to increase their self-esteem and to find ways to reduce their risk of future trauma. If the young person agrees, this support continues, following the young person through admission if needed, and back out into the community. The programme aims to meet the immediate, often complex needs of young people and helps to engage them with other service in ways that NHS EDs currently cannot.

The Redthread YVIP is already working in 12 hospital sites of varying sizes. This report summarises a qualitative evaluation project conducted whilst the YVIP was funded to expand into sites in Birmingham and Nottingham funded by The Health Foundation. We used interviews, documents and participant observation to collect our primary data. We rapidly searched and reviewed the available academic, 'grey' and policy literature. Our aim was to understand the evidence that NHS staff and policy-makers at all levels were using to help them consider and support adoption of the intervention.

1 Glasgow's Community Initiative to Reduce Violence: Second Year Report. (Undated) Violence Reduction Unity, Strathclyde, Scotland. http://actiononviolence.org/sites/default/files/CIRV_2nd_year_report.pdf last accessed 29/11/2019

2 Goodall C, Jameson J and Lowe D. Navigator: A tale of two cities. (undated) University of Glasgow, Scotland. http://actiononviolence.org/sites/default/files/Navigator%20 12%20month%20report%20%282%29_0.pdf last accessed 29/11/2019

3 Mentors in Violence Prevention Scotland. Progress Report 2017-18. http://actiononviolence.org/sites/default/files/Education%20Scotland%20Mentors%20in%20Violence%20 Prevention%20%20Annual%20Report%202017%20to....pdf Last Accessed 29/11/2019

4 Scottish Violence Reduction Unit: 10 Year Strategic Plan. SVRU (undated) http://actiononviolence.org/sites/default/files/10%20YEAR%20PLAN_0.PDF last accessed 29/11/2019

The two report authors have clinical Emergency Department backgrounds and were members of the ED research team (DREEAM) in the primary site in Nottingham throughout the project. Our analysis describes how the YVIP embeds and works within the NHS and the wider social care system. We focus on the multiple contextual factors which have enabled the recent expansion of the YVIP, its continuing adaptation to fit within new EDs and what this evidence can tell us about how to spread YVIPs further to support young people.

We found that the need for a dedicated YVIP service is well understood and appreciated within the EDs currently hosting the service but is not yet universally accepted across the NHS. The success of existing sites represents an opportunity for the NHS to play a larger role in tackling cyclical youth violence but both the learning gained and the benefits achieved need to be better captured and communicated. Our key, high level findings are shown in box 2.

Box 2 High level findings

Great willingness from NHS clinical staff and organisations in local areas to engage with and support the work of the YVIPs

Clear acknowledgement that NHS Emergency and MTC services are unable to offer equivalent identification, assessment and "wraparound" support to young people experiencing violence and exploitation

Consensus that youth violence has complex roots within communities and that hospital-based interventions can only make a significant contribution where they are firmly linked to a strong network of community provision and longer-term support

Close cooperation across NHS, Local Authority and Criminal Justice services is needed to provide a firm foundation for the continued development of YVIPs

The opportunities to define shared goals across health and social care systems have been enhanced by the creation of Violence Reduction Units and restructuring of the NHS to deliver integrated "place-based" care

Despite this agreement that youth violence requires a 'joined-up' public health response and multi-agency collaboration, current expansion plans remain fragmentary. Our findings also indicate the existence of factors which could undermine further spread of the service. These are set out in box 3.

Box 3 Potential threats and barriers for further spread of YVIPs

Long-standing weaknesses in the way that the NHS approaches the development, embedding, spread and sustainability of innovative services, especially where provided by an external provider

The need for more detailed and local analysis of the impact of YVIPs to justify sustained funding

Lack of comparative studies from the UK demonstrating the effect of the service compared to standard ED care

The need to measure impacts beyond the hospital episode to support cross-system funding

Lack of agreement amongst service leaders as to what 'counts' as evidence and how much evidence is sufficient to justify further or sustained investment

A broad context of contractions in resources across acute health, public health, social care and criminal justice services: agreeing what to do could mean agreeing what to stop

A failure to value and integrate routine data to describe how YVIPs are supporting the work of NHS and other staff, ensuring safety after discharge and securing engagement with community-based services

There is a significant amount of information available from published evaluations and academic research on how YVIPs function, how elements of the intervention work and how wider impacts can be demonstrated. We found that the value of this evidence was often contested: which outcomes should be measured; which study designs were appropriate; how generalisable were findings. We heard that better evaluation evidence such as routine data and case studies from existing NHS sites could show what had worked and how well and could help drive adoption.

We sometimes found a reliance on highly motivated individuals to promote adoption by giving access to NHS organisations, leveraging personal and professional networks and internal lobbying. The advent of 'population health' approaches and greater integration of care across larger areas could help build on the work of these 'entrepreneurs' but found that the profile of youth violence prevention at these levels within the NHS was not yet sufficiently high to support widespread collaborative commissioning of YVIPs.

The academic evidence from the US shows that YVIPs exert at least some of their effect by helping young people access or re-engage with, existing longer-term support such as education and mental health care. This could be better demonstrated by UK sites using follow-up data from young people and linking data across collaborating organisations to measure improvements in outcomes of interest to the many agencies involved listed in box 4.

Box 4 Other outcomes of the YVIP which demonstrate wider impacts and cost benefits more clearly

Reductions in involvement in violent crime, exploitation and weapon carrying

Greater uptake of services and re-engagement with education, social care, housing, employment and mental health services

Reductions in re-injury rates, severity of injury and evidence of improved mental health and wellbeing

Contributions to population-level public health indicators such as community safety after implementation in new area

Improvements in the confidence and ability of NHS emergency and urgent care staff to work with vulnerable young people

Our interviewees were mainly drawn from the NHS, public health and local government. Their experiences and views illustrated for us the need to situate YVIPs firmly within existing networks of services, working closely with the communities in which vulnerable young people live and to which they return. We found that the day-to-day operation of the YVIPs had achieved this aim through well-established cooperation and referral processes. There was a considerable burden on Redthread to build multiple, effective relationships simultaneously, especially at new sites. Perhaps inevitably, some relevant organisations that we spoke to felt less consulted or engaged than they would like. We saw that the new VRUs were a potentially key response to these challenges. They were able to foster formal and informal networks, share knowledge and experience and coordinate the multi-agency responses required.

We also felt that the VRUs could help encourage closer involvement of the NHS at a number of levels. The NHS adopts innovative models of care more readily when "there [are] established forums for bringing together commissioners and providers across the region and sharing [of] learning"[66].

This is even more important in the area of youth violence and exploitation where many key organisations are outside of the health sector altogether. Documentary and observational evidence showed us that the VRUs are driving adoption of YVIPs by bringing acute and public health, social services and the police and criminal justice systems together with the community and voluntary sector in new ways. This will help to identify the core shared goals needed to align policy and operational responses.

Within the NHS itself we saw how multi-disciplinary steering groups and operational groups formed the main connections with both the wider system and NHS clinical staff and systems internally. Consistent engagement with all stakeholders, particularly busy clinical and managerial staff was sometimes difficult to

maintain. Nonetheless maintaining these groups is essential for long-term viability and represents the ideal of 'communities of practice' in each local area but which can also feed upwards into national policymaking circles.

Our findings suggest that a valuable window of opportunity now exists to widen access to YVIPs to all young people who could benefit. Three important factors were often referred to in our evidence gathering (box 5).

Box 5 Key factors for spread of YVIPs

Continuing rises in youth violence and exploitation whilst looking beyond 'knife crime' headlines and public alarm

The creation of a policy environment which seeks to foster alternative approaches to violence reduction

Widespread cross-disciplinary recognition that community violence is a public health issue requiring a proactive, preventative response

It was also clear that universal provision of YVIP in all EDs with young people in need is unlikely to be delivered rapidly or sustainably by any single agency or organisation whatever the policy backdrop. Most of those we spoke to (and many readers of this report) individually felt they had little or no direct control over many of the real world factors we highlight in more detail in the main report. Many described important and stubborn contextual, practical and organisational barriers to further implementation and sustainability.

The main body of this report describes a number of these findings and makes recommendations which could help increase the spread and adoption of YVIPs. Some of the positive opportunities we found are described in box 6.

Box 6 Positive opportunities to increase spread and sustainability

The development of new delivery and dissemination models to accelerate spread of directly-provided youth violence prevention services and enhanced capabilities of NHS staff in smaller EDs through training and satellite support

Using the learning gained from existing YVIPs as to how new sites can maintain fidelity to the 'theory of change' and quality of the specialist youth work offered by Redthread

Exploiting the 'natural experiment' of phased implementations to generate high quality comparative evaluations of the service to demonstrate impact compared to standard care

Developing cross-system, place-based funding agreements with an explicit commitment to share data to support evaluation of outcomes within and beyond the NHS

Maximising the role of Violence Reduction Units to provide expertise, support collaborations and coordinate new implementations of the YVIP within existing systems in each integrated care system footprint

Ensuring NHS clinical and managerial staff are resourced to work closely with YVIP teams to maintain referral levels and maximise access to the service in each area

During our evaluation we found that 'best practice' in assessment, practical and psychosocial support and safe discharge for young people after violence and exploitation, cannot currently be offered by the NHS consistently without the support of specialist services such as the Redthread YVIP. In contrast, we found limited evidence that addressing youth violence is a key priority for the acute NHS given current competing demands. We were told that in many places a coordinated, multi-agency response which closely involves the NHS, is lacking. These findings help explain the ad hoc spread of YVIPs since their introduction but also point to how the situation could change. Redthread already provide a successful YVIP for young people in some EDs but more work is needed to demonstrate its full impact and benefits, both for young people and the 'system'.

The NHS has put prevention of illness and reduction of health inequalities at the heart of its future development[5]. It already devotes considerable resource to avoiding the unsafe discharge of vulnerable people back into the environment that contributed to their illness or injury[6]. We found an emerging consensus that YVIPs could enable NHS emergency departments to identify and support vulnerable young people affected by violence and exploitation more effectively and for similar reasons: because it is the right and cost-effective thing to do. Widespread implementation of YVIPs linked to strong, onward community care, would ensure that many more young people in need when leaving the NHS emergency and urgent care system could be helped to a better future.

5 https://www.longtermplan.nhs.uk/online-version/
6 NICE Guideline NG27 December 2015 available at https://www.nice.org.uk/guidance/ng27

2 Introduction

2.1 Adversity-Related Injury in young people

Many children and young people face harms or Adverse Childhood Experiences (ACE)[7] which can lead to dramatic and sometimes life-long, impacts on health and wellbeing[10,8,9]. ACEs leave many young people vulnerable to violent injury, victimisation and criminal or sexual exploitation. Such vulnerabilities are then further affected by each individual's family circumstances, social situation, relative socio-economic deprivation and the influences of their local community[10,11].

Up to 1 in 4 children have experienced an ACE[12] which can lead to a cycle of later violence, delinquency, bullying, weapon-carrying and substance misuse. ACEs are also associated with high rates of self-directed violence such as self-harm behaviours and suicide[12]. Other experiences of family life such as inconsistent discipline, parental separation or neglect or criminality, are also risk factors for involvement in violence whether as victims or perpetrators[13]. A lack of stable relationships can lead individuals to seek inappropriate emotional bonds outside of the home, putting them at further risk of abuse, coercion and manipulation.

"You are more likely to exhibit violent behaviour if you're exposed to violence when you're younger and that can be violence in various different forms." – Public Health Practitioner

Around 1 in 10 children in the UK suffer from a diagnosable mental health disorder often continuing into adulthood[14] with males more likely to suffer poor mental health. Risk factors include socio-economic disadvantage and a history of being in local authority care[15].

School exclusion or circumstances within the school system may add additional risk. School is a source of routine, a nurturing environment and safe stable relationships for those who lack such relationships at home[16]. Delinquent peer relationships, disruptive behaviour and bullying can all reduce educational attainment, increasing the risk of truancy, exclusion and exposure to exploitation and violence[18].

7 Hughes, K., Bellis, M.A., Hardcastle, K.A., Sethi, D., Butchart, A., Mikton, C., Jones, L. and Dunne, M.P., 2017. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. The Lancet Public Health, 2(8), pp.e356-e366.
8 Javier, J.R., Hoffman, L.R. and Shah, S.I., 2019. Making the case for ACEs: adverse childhood experiences, obesity, and long-term health. Pediatric research, 86(4), pp.420-422.
9 Felitti, V.J., Anda, R.F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V., Koss, M.P. and Marks, J.S., 2019. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. American journal of preventive medicine, 56(6), pp.774-786.
10 Dube, S.R., 2018. Continuing conversations about adverse childhood experiences (ACEs) screening: A public health perspective. Child abuse & neglect, 85, pp.180-184.
11 Young People and Social Change: New Perspectives Furlong K and Cartmel F 2007 Open University Press https://books.google.co.uk/books?hl=en&lr=&id=ZYrNMhz_hE4C&oi=fnd&pg=PP1&dq=furlong+and+cartmel&ots=XO-Of_yjJc&sig=JhHxRMIEVq8YSjXCpOIkT7AYHb8#v=onepage&q=furlong%20and%20cartmel&f=false
12 Duke, N.N., Pettingell, S.L., McMorris, B.J. and Borowsky, I.W., 2010. Adolescent violence perpetration: associations with multiple types of adverse childhood experiences. Pediatrics, 125(4), p.e778.
13 Utting, D. and Home Office Research. Development and Statistics Directorate (London)., 1996. Reducing criminality among young people: A sample of relevant programmes in the United Kingdom. London: Home Office.
14 Joint Service Needs Assessment Toolkits https://www.gov.uk/government/publications/better-mental-health-jsna-toolkit/5-children-and-young-people
15 Public Health England 2016 The mental health of children and young people in England https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/575632/Mental_health_of_children_in_England.pdf
16 A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviours 2016 Centres for Disease Control. (US) https://www.cdc.gov/violenceprevention/pdf/yv-technicalpackage.pdf

Some young people are reluctant to seek support from the police or victim support or other services, sometimes as a result of peer or coercive pressure. In turn, exposure to social norms which support violence can lead to cycles of personal risk and can be hard to escape[17].

2.2 Violence as a health issue

There are obvious and dramatic consequences of ACEs with implications for NHS emergency services. Public Health England report there were 2.5 million violent incidents in England and Wales resulting in 300,000 Emergency Departments (ED) attendances and 35,000 admissions with an estimated direct cost to the NHS of £2.9 bn[17]. These figures exclude the far larger costs of secondary impacts such as addiction.

In 2011, 13,000 young people attended EDs for an assault related injury and of those assaults 1 in 7 involved a knife or sharp object[19]. Young people at risk of injury also report high rates of binge drinking and smoking marijuana[19]. Adolescents in urban EDs are more likely to die from violence than illness[20] and young people presenting after violent injury had a significantly higher 10 year risk of death or re-admission compared to those with accidental injury[21]. Adversity-related injuries of all kinds are under-recorded if not unrecognised by ED staff.

A 'public health' approach to violence is now an emerging theme in the UK[22,23] where youth violence and exploitation are thought of as analogous to "contagious disease"[17]. These might include one-to-one psychosocial interventions to increase personal "immunity" or "resistance" to violence and community work to reduce its "transmission". This new policy landscape is characterised by a focus on novel alliances between criminal justice, local authority and health systems[24]. These include Community Safety Partnerships and the recent creation of Violence Reduction Units. VRUs have been launched or planned in 18 English cities and are explicitly collaborative, place-based responses to violence. Many have a specific focus on young people and their particular risks[25]. A key ingredient to this approach is the involvement of NHS services such as EDs to help identify the vulnerabilities leading to injury and to mount an early response.

---

17 Protecting People, Promoting Health: A public health approach to violence prevention for England. 2012 Department of Health, London https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/216977/Violence-prevention.pdf

18 Young People and Social Change: New Perspectives Furlong K and Cartmel F 2007 Open University Press https://books.google.co.uk/books?hl=en&lr=&id=ZYrNMhz_hE4C&oi=fnd&pg=PP1&dq=furlong+and+cartmel&ots=XO-Of_yjJc&sig=JhHxRMIEVq8YSjXCpOIkT7AYHb8#v=onepage&q=furlong%20and%20cartmel&f=false

19 Walton, M.A., Cunningham, R.M., Goldstein, A.L., Chermack, S.T., Zimmerman, M.A., Bingham, C.R., Shope, J.T., Stanley, R. and Blow, F.C., 2009. Rates and correlates of violent behaviors among adolescents treated in an urban emergency department. Journal of Adolescent Health, 45(1), pp.77-83. https://www.sciencedirect.com/science/article/pii/S1054139X08006575

20 Cunningham, R.M., Vaidya, R.S., Walton, M. and Maio, R.F., 2005. Training emergency medicine nurses and physicians in youth violence prevention. American journal of preventive medicine, 29(5), pp.220-225. https://www.sciencedirect.com/science/article/pii/S0749379705003168

21 Herbert, A., Gilbert, R., Gonzalez-Izquierdo, A., Pitman, A. and Li, L., 2015. 10-year risks of death and emergency re-admission in adolescents hospitalised with violent, drug-or alcohol-related, or self-inflicted injury: a population-based cohort study. PLoS medicine, 12(12), p.e1001931

22 Violence- A Global Public Health Problem. WHO, Chapter 2 Youth Violence, Geneva. https://www.who.int/violence_injury_prevention/violence/global_campaign/en/chap2.pdf?ua=1

23 Slutkin, G., 2013. Violence is a contagious disease. In Contagion of violence, forum on global violence prevention, workshop summary. Institute of Medicine and National Research Council. Washington, DC: The National Academies Press (pp. 94-111).

24 Serious Violence Strategy 2018, The Home Office, HM Government https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/698009/serious-violence-strategy.pdf

25 Serious Violence Affecting Young People in London: Progressing a public health approach violence prevention and reduction. 2018 (Presentation slides) GLA and MOPAC, London. https://www.london.gov.uk/moderngovmb/documents/s62874/03a%20Public%20Health%20Approach%20presentation.pdf last accessed 24/10/2019

2.3 Current Emergency Department response to Adversity-Related Injury in young people

Calls for a more integrated response to the problem of violence from Emergency Departments the wider NHS and other agencies date back many years[26,27,28]. Effective responses to the harm resulting from ACEs, "secondary or tertiary prevention", are known to reduce harm and alter outcomes[29].

YVIPs in EDs are proposed as a way to add psychosocial care to physical care to reduce the risk of repeat injury after violence or exploitation. The scale of these problems presents a challenge to NHS EDs which are geared to treating physical harm and have high workloads. Whilst emergency psychiatric assessment and treatment is readily available for those presenting to EDs with a mental health need, a similar response is not available after violent injury or exploitation. Structured assessment, consideration of family and community sources of risk and timely practical assistance is not well integrated into emergency medical and nursing care, available routinely to older young people[30] or during the "transition" from adolescence to early adulthood[31].

ED staff may lack the knowledge, skills and resources to offer individualised psychosocial assessment and support at the point of crisis[32,33]. In the US, a multi-disciplinary team approach has been used. Key features include an immediate risk assessment, identification of community risk and protective factors, the development of personal skills and resilience and coordination, and advocacy and support for the young person to engage with a range of external services[34]. Many of these components have an evidence base and they mark a significant departure from conventional criminal justice system approaches such as "boot camps" and "short, sharp shocks" which have been the mainstay of the US response to youth violence[35].

In the UK similar schemes have been developed and deployed in EDs but these remain the exception outside London. The early success of the Navigator programme developed by the Violence Reduction Unit in Scotland and the Redthread London network itself are cited as beacons of best practice. The rationale of these programmes is to take the immediate aftermath of violence as an opportunity for young people to voluntarily address the factors in their life that put them at risk and a chance for them to receive direct support, engage with the police and be referred to other services they may need.

Many YVIPs have emerged from detailed work with young people themselves. Snider and colleagues in the US[36] used a concept mapping and validation process with around 90 young people and community youth workers to understand the needs of young people following violent injury. Better training of hospital staff, the use of non-judgemental and "listening" approaches and help in making connections with services back in the community were all highly valued by young people. A key feature of such work is also to raise awareness of this group amongst emergency and major trauma staff. This helps ensure that they can consistently identify and refer young people in need and can require a change of attitude and approach from staff used to focussing on physical needs.

26 Shepherd, J.P. and Rivara, F.P., 1998. Vulnerability, victims and violence. Emergency Medicine Journal, 15(1), pp.39-45.
27 Robinson, F. and Keithley, J., 2000. The impacts of crime on health and health services: a literature review. Health, Risk & Society, 2(3), pp.253-266.
28 Spivak, H.R. and Prothrow-Stith, D., 2003. Addressing violence in the emergency department. Clinical Pediatric Emergency Medicine, 4(2), pp.135-140.
29 Oral, R., Ramirez, M., Coohey, C., Nakada, S., Walz, A., Kuntz, A., Benoit, J. and Peek-Asa, C., 2016. Adverse childhood experiences and trauma-informed care: the future of health care. Pediatric research, 79(1-2), p.227.
30 Sullivan, K., Samarendra, H., Malbon, K. and Orteu, D., 2019. (P8) Adolescent psychosocial history using HEADSS in a tertiary paediatric emergency department. BMJ Paediatrics Open 2019;3(Suppl1):A1–A34
31 From the pond into the sea: Children's transition to adult health services. 2014 Care Quality Commission, London. https://www.cqc.org.uk/sites/default/files/CQC_Transition%20Report.pdf last accessed 13/09/2019
32 Denninghoff, K.R., Knox, L., Cunningham, R. and Partain, S., 2002. Emergency medicine: competencies for youth violence prevention and control. Academic EmergencyMedicine, 9(9), pp.947-956.
33 Sidelinger, D.E., Guerrero, A.P., Rodríguez-Frau, M. and Mirabal-Colón, B., 2005. Training healthcare professionals in youth violence prevention: an overview. American journal of preventive medicine, 29(5), pp.200-205.
34 Cunningham, R., Knox, L., Fein, J., Harrison, S., Frisch, K., Walton, M., Dicker, R., Calhoun, D., Becker, M. and Hargarten, S.W., 2009. Before and after the trauma bay: the prevention of violent injury among youth. Annals of emergency medicine, 53(4), pp.490-500.
35 Fein, J.A., Mollen, C.J. and Greene, M.B., 2013. The assault-injured youth and the emergency medical system: What can we do?. Clinical Pediatric Emergency Medicine, 14(1), pp.47-55
36 Snider, C.E., Kirst, M., Abubakar, S., Ahmad, F. and Nathens, A.B., 2010. Community based participatory research: Development of an emergency department–based youth violence intervention using concept mapping. Academic emergency medicine, 17(8), pp.877-885.

2.4 The development of the Redthread Youth Violence Intervention Programme

There have been sustained calls for an effective response to rising knife crime and violence experienced by young people. The Home Office has explicitly sought innovative ways of tackling serious violence[24]. A shift towards a combined police and public health approach is a key contextual factor underpinning the spread of the YVIPs into hospitals.

Redthread have developed a comprehensive, youth worker–delivered service offered to young people soon after they attend NHS EDs after violence or exploitation. The initial site at King's College Hospital was opened in 2006 followed by St. Mary's Hospital, Paddington in 2014. The initiative has since spread to other EDs in London, Birmingham and Nottingham. The YVIP extends assessment and support beyond that delivered by NHS safeguarding teams both in terms of age and eligibility. Redthread can be viewed as "social entrepreneurs", making a detailed case for working directly in acute hospital departments delivering an individualised service more commonly offered, if at all, once a young person is discharged. They seek to maximise the support and prevention possibilities of working with young people in the emergency setting itself by working alongside and influencing, existing organisational responses to the needs of young people in crisis.

Driving a "social innovation" carries greater risks and challenges than merely delivering a conventional service[37] as YVIPs have yet to be widely accepted as a standard part of NHS emergency care. Continuous negotiation for funding and sustainability takes up significant resources within Redthread and as with many similar voluntary and community sector providers, this takes resources best devoted to delivering, managing and improving services.

2.5 What the programme delivers

YVIP services consist of youth workers based within the ED who respond to referrals from ED staff of young people meeting a loose set of criteria based on their age, circumstances of their injury, need for support and willingness to engage.

Redthread youth workers undergo a six week induction and core training programme and receive ongoing training throughout their time with the charity. Most are already experienced youth workers with backgrounds in mental health, youth justice services and social work. For many however, working in an acute hospital setting is new. Hospital-focussed training and mentoring have been developed by Redthread to prepare them and continued clinical supervision support is provided for all staff who work directly with young people.

YVIP youth workers are situated directly within EDs. Clinical staff identify eligible young people and gain initial agreement from them to meet a youth worker when clinical needs allow. Where agreed locally, youth workers may actively screen ED patient administration systems for potential cases and then prompt clinical teams to enquire and refer young people who agree. In some centres, youth workers attend major trauma "calls" when the hospital major trauma response is activated for a patient expected to arrive with serious injury to see if their support is required.

With the verbal consent of the young person the youth worker conducts a person-centred "risk and needs" assessment to identify the circumstances surrounding their attendance. This occurs as soon as possible after urgent treatment has been administered. Once consent is gained a fuller assessment includes elements such as "safety planning", geographical "mapping" of risk and a psychosocial assessment. The youth worker formulates a risk reduction plan with the young person. If appropriate and required, the young person gives written consent for a support "package" to be provided. Each approach is individualised and elements of support are put in place during their ED or hospital stay or beyond as they recover and are discharged. Minimal records are created within the hospital information system or written records up until the young person gives full consent. This ensures that valuable information is available to NHS staff whilst creating a trail for

37 Van Wijk, J., Zietsma, C., Dorado, S., de Bakker, F. G. A., & Martí, I. (2019). Social Innovation: Integrating Micro, Meso, and Macro Level Insights From Institutional Theory. Business & Society, 58(5), 887–918. https://doi.org/10.1177/0007650318789104

audit and governance purposes. The complete record of each intervention is stored on a non-NHS system purchased by Redthread supplied by Lamplight (https://www.lamplightdb.co.uk/).

The intervention is tailored to the needs of the individual and commonly continues for around 12 weeks but varies with individual's circumstances. Youth workers support access to or re-engagement with services such as the police, mental health, social care, housing and education. Other components of the intervention include a community "safe places and spaces" check, the use of an "actualisation ladder" and problem solving coaching along with delivering written material and encouraging the use of tools to foster emotional self-regulation and build self-esteem. This "trauma-informed" approach aims to respond to the immediate crisis and help each young person address and reduce their future risk. The YVIP complements other services within the NHS site such as safeguarding teams and social services to ensure a "wraparound" package of measures.

Redthread coordinate access to other services rather than provide them directly. This coordination function and their youth workers' detailed knowledge of both the needs and available resources for young people are not available within EDs at present. A further vital component is the advocacy role that is often adopted to help young people negotiate the difficulties they encounter soon after their injury. This often includes an intermediary role in communications between health, social care and police personnel as well as accompanying a young person to formal and informal meetings and assessments after they have left hospital.

The YVIP connects many community institutions to access help for young people whilst the Redthread organisation itself works at many levels to influence policy and provision of services (Fig. 1).

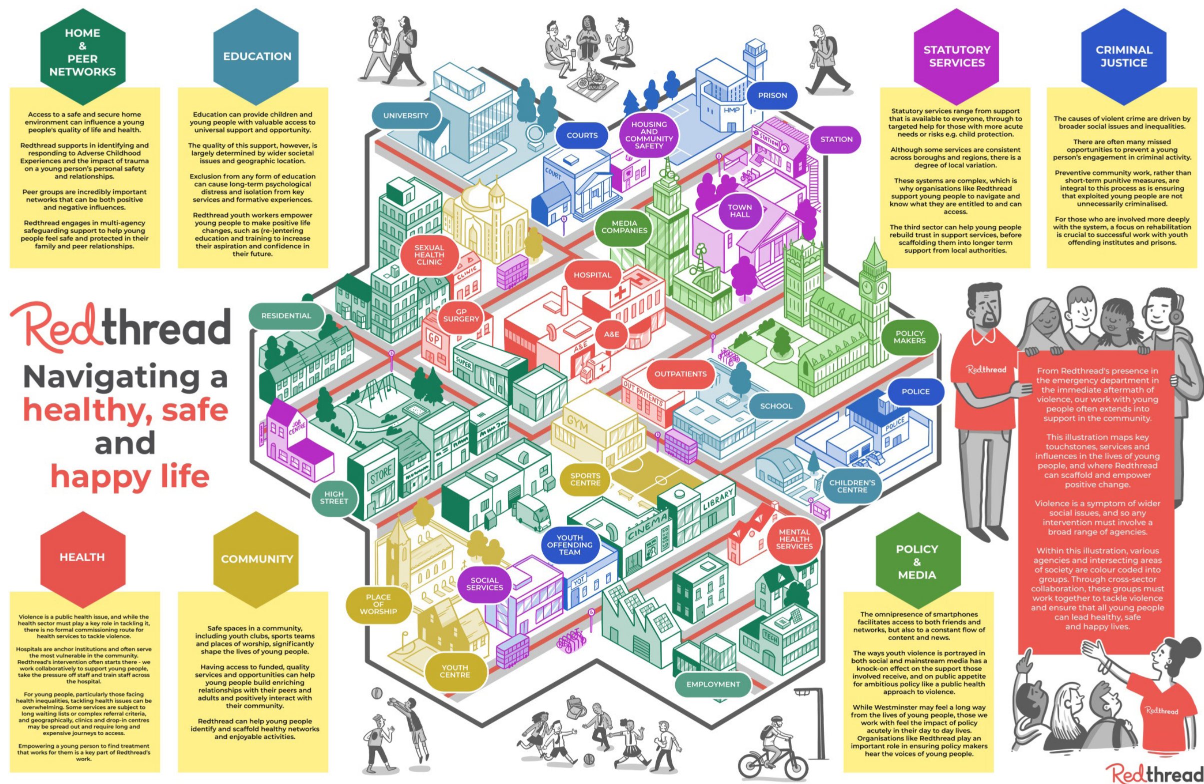


Figure 1 Redthread and the Youth Violence Intervention Programme advocate for young people at many places and levels

2.6 The Theory of Change

Complex health interventions work by employing a variety of mechanisms connecting what is delivered to a patient with various outcomes. These changes can have short, medium and longer term impacts. The degree to which these mechanisms are explicit, distinct and rooted in evidence of effectiveness is key to defining and demonstrating the benefits for young people receiving the intervention. Collectively these mechanisms are referred to as the intervention "theory of change" which sets out the causal processes which are thought to lead to improvements in specific outcomes.

A central feature of the Redthread theory of change is the "teachable moment" (Appendix 1). This has been defined by Cohen[38] as comprising three components which are required to achieve a behaviour change (box 7).

Box 7 The "teachable moment"

The interaction must involve a health issue the person recognises as relevant to their health and wellbeing

The interaction must involve some health promotion content from the professional

The interaction must include some commitment to change from the individual themselves

The teachable moment principle is suited to the context of emergency medicine and is not new to emergency settings. It relies on supporting the individual at a time of crisis to make self-protective decisions and choices.

"no-one really does anything with this group of kids who say 'we don't want to engage here and we don't want to engage here', but actually there's this really reflective teachable moment when they are victims that enables you to then look at the whole person" – **Redthread Senior Management Team**

Many existing injury prevention and health promotion programmes employ the 'teachable moment' concept e.g. for alcohol misuse attendances[39] as is the related "sentinel event theory" which has been employed to help those facing life changing illness or injury to address lifestyle factors[40,41]. As discussed, ED staff face mounting demand and pressures on their time with even essential care increasingly delayed[42]. Delivering a holistic intervention and creating a teachable moment may be unrealistic for clinical staff and this is the central argument for the need to implement YVIPs across the NHS.

38 Cohen, D.J., Clark, E.C., Lawson, P.J., Casucci, B.A. and Flocke, S.A., 2011. Identifying teachable moments for health behavior counselling in primary care. Patient education and counselling, 85(2), pp.e8-e15.

39 Drummond, C., Deluca, P., Coulton, S., Bland, M., Cassidy, P., Crawford, M., Dale, V., Gilvarry, E., Godfrey, C., Heather, N. and McGovern, R., 2014. The effectiveness of alcohol screening and brief intervention in emergency departments: a multicentre pragmatic cluster randomized controlled trial. PLoS One, 9(6), p.e99463.

40 Boudreaux, E.D., Bock, B. and O'Hea, E., 2012. When an event sparks behavior change: an introduction to the sentinel event method of dynamic model building and its application to emergency medicine. Academic Emergency Medicine, 19(3), pp.329-335.

41 Snider, C. and Lee, J., 2009. Youth violence secondary prevention initiatives in emergency departments: a systematic review. Canadian journal of emergency medicine, 11(2), pp.161-168. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/931C3A46F64A92676DA27A2E27E90566/S1481803500011131a.pdf/youth_violence_secondary_prevention_initiatives_in_emergency_departments_a_systematic_review.pdf

42 What's going on with Emergency waiting times? The King's Fund 2018 https://www.kingsfund.org.uk/projects/urgent-emergency-care/urgent-and-emergency-care-mythbusters#ae-performance-measurement

3 The "adoption and spread" evaluation

3.1 Aim

In this evaluation we set out to understand how an Emergency Department-based Youth Violence Intervention Programme running successfully in a small number of MTCs and EDs, could be spread throughout the NHS emergency care system and be available to all young people who could benefit. We have tried to identify all of the important contextual factors that have led to this initial deployment and highlight what we think could contribute to wider access across the country.

We have gathered evidence from interviews with police, health, local authority, voluntary and community sector figures with first-hand knowledge of youth violence along with assessing a wide range of the organisational, policy and research sources with which they guide their decision-making. The evaluation was conducted between December 2018 and January 2020. An outline interview schedule is included as Appendix 2. We periodically shared and discussed our findings with the Redthread team as they are constantly refining and developing their processes.

This report is intended for an NHS audience but also to inform partner organisations who wish to work more effectively with acute health services to support young people immediately after violent injury. This report has been written independently under the guidance of The Health Foundation and the views expressed should not be taken to representing those of any of the people or organisations named or consulted.

To "scale-up":

"deliberate efforts to increase the impact of health service innovations successfully tested in pilot or experimental projects so as to benefit more people and to foster policy and program development on a lasting basis."
– **WHO ExpandNet Initiative**[43]

The evaluation work is funded as part of The Health Foundation "Scaling-Up For Improvement" work stream[44].

We aimed to include a number of issues of relevance to further adoption of the YVIP within the NHS emergency care system (box 8).

Box 8 Initial questions to be addressed in the evaluation

How can Redthread demonstrate that the YVIP is effective and meets NHS criteria for governance and quality?

How can the YVIP demonstrate it is replicable and measurable using defined fidelity criteria?

How do current operating procedures, training and frameworks for collaboration with various NHS teams and functions increase integration of Redthread within the NHS?

How can Redthread and NHS governance policies and quality assurance processes be developed to facilitate and monitor implementations at each site?

Do YVIPs and host NHS sites have sufficient capacity and reach to demonstrate equitable access to all young people visiting NHS EDs?

How can evidence from research and local evaluations be interpreted and developed to support spread across the NHS?

Where can the Redthread YVIP fit within the new and existing NHS and local government 'health and wellbeing' structures such that it becomes sustainable?

43 https://expandnet.net/
44 https://www.health.org.uk/funding-and-partnerships/programmes/scaling-up-improvement

3.2 Set-up of the Evaluation

Redthread approached The Department for Research and Education in Emergency and Acute Medicine, situated within the Emergency Department at Nottingham University Hospitals NHS Trust to conduct an evaluation focussing on the spread of the Redthread intervention into Midlands NHS Trusts. An outline protocol was developed by the Chief Investigator (PM) and agreed with Redthread and The Health Foundation. Peer review of the protocol was provided by The Health Foundation (MK) and the study was further reviewed and sponsored by the Nottingham University Hospitals NHS Trust Research and Innovation department. Health Research Authority (HRA) approval was gained to enable data collection from NHS staff. The approved protocol is included as Appendix 3.

Each other named NHS trust has appointed a Principal Investigator (PI) who is also the clinical collaborator for the Redthread intervention. We also interviewed many people within the NHS but not affiliated with particular Trusts in their role as well as many people outside of the NHS. We applied the same processes of consent, data protection and processing to all personal identifiable data.

3.3 Amendment 1

An amendment to the original protocol was submitted and approved by the Health Research Authority (HRA). The main change was to allow an online survey to be sent to NHS ED clinical staff to gain further insight into their experiences of working with the YVIP and designed to complement our interview data.

3.4 Methods

3.4.1 Site selection

Sites were chosen to allow data to be collected from established and relatively new YVIP implementations. We collected a significant amount of data from the study base site in Nottingham where the intervention had been running for over a year at the start of this evaluation. We also interviewed and visited an NHS ED which was considering adoption of the YVIP model and another non-metropolitan site with an established team. We were unable to visit a London YVIP site as planned but did interview a number of individuals able to present various perspectives on the established YVIP sites within the capital.

3.4.2 Data Collection

The evaluation methodology is set out in the approved protocol and the evaluability assessment conducted by the Chief Investigator (PM) (Appendix 3 and Appendix 4 respectively).

The Health Foundation encourages evaluators to use formative feedback when working with implementation teams (box 9).

Box 9 The Health Foundation formative feedback approach

Informs and improves the innovation iteratively

Assists in gaining immersive access for evaluators

Increases the accuracy and quality of the evaluation

The feedback process operated through meetings with senior Redthread staff and the evaluation team have attended numerous operational meetings as participant-observers and have had frequent informal interactions with frontline NHS and Redthread staff.

We observed and participated in a wide range of different meetings and other non-patient interactions. Field notes and occasionally digital audio recordings were made with the agreement of participants. These were not formally transcribed but used to triangulate other material in our analysis. Relevant documents were obtained from as many NHS sites and organisations as possible.

No data were collected from service users or NHS patients. We contacted a wide variety of stakeholders and direct participants including Redthread staff and senior management, NHS clinicians and senior leadership and staff from other services such as the police and local authorities. We also sought the views of researchers with expertise in the field of youth violence and criminal justice. We had access to a number of internal and external reports and other materials from many organisations including Redthread and its various partners.

All data and documents were transferred to the host site as electronic or digital sound files and stored on encrypted and password protected laptop hard drives or via the ".net" secure email system or via virtual private network (VPN) access to the secure hospital shared limited-access research network areas at the study site.

The NHS computer network at the host site is password and access restricted. Only members of the immediate study group have access to study material.

3.4.3 Interviews

We developed outline interview schedules to structure our first interviews and an early example is given in Appendix 2. These were adapted as we coded and shaped out data into themes adding specific prompts to schedules for later interviews depending on individuals' roles, possible experiences or potential perspectives. We conducted and digitally recorded interviews in person or by telephone with the written consent of participants. These were transcribed and anonymised by an external research transcription company. Where a participant refused to be recorded we have made notes of their contributions with limited verbatim quotes. We have agreed with individual participants how their role will be referred to in our outputs to provide the necessary context whilst ensuring they could speak freely.

3.4.4 Participants

We identified a total of 118 people to approach for formal or informal interview during the initial phases of the evaluation work whilst awaiting HRA approvals and from later "snowball" recruitment processes where previous participants suggest others for us to approach.

The table 1 gives a picture of the source of contacts and their professional affiliation, background or role. In fact many individuals we interviewed performed or had experience in, multiple relevant roles and some worked across organisational boundaries either at the time of recruitment or over the course of their careers.

Table 1 Professional affiliation or role of people identified for interview

Professional Affiliation	Number of individuals approached
NHS	35
Funder/policy maker/academic	11
YVIP provider	24
Police and criminal justice	15
Statutory, voluntary and community services providers	33

We were able to approach 90 of these individuals and asked them to participate in a formal or informal interview. We were able to conduct 36 semi-structured interviews with data collected from other contacts informally during phone calls, site visits or other meetings. We conducted 27 interviews face to face and 9 by telephone. The interview durations ranged from less than 15 minutes to over an hour. Some group interviews were conducted at the convenience of the individuals and these were more discursive and incorporated some feedback work with Redthread senior managers. Four interviews were not recorded digitally but contemporaneous notes were made. We completed approximately 60 hours of participant observations including four site visits (three health providers hosting the YVIP and to the Redthread offices in London).

We assimilated and analysed a wide variety of publically available or privately shared organisational, policy, academic and other documents from many sources: Home Office, NHS, Public Health England including publications and other communications; NHS local and national regulatory policies and frameworks; local authority internal and public documents; written communications and relevant committee minutes and records; online and new media sources such as news and organisational communications. We created a Twitter account for the evaluation to monitor developments in the topic space. This helped us to understand the wider debate, identify key individuals and gain an insight into the influences on youth violence reduction work.

3.4.5 Field Notes

Field notes of meetings and other events were created to record contextual and background information during or soon after meetings. We captured objective and subjective impressions of these meetings but no direct quotes from these sources are reproduced in this report.

3.4.6 Documentary data

We performed a rapid, purposive and non-hierarchical literature search giving equal weight to grey and policy sources as to academic studies and trials. This reflects the pragmatic use of evidence we found was adopted by many of our interviewees: we read what they read rather than what we thought they should have read.

We created a cache of documents obtained from the intervention provider, host sites and partner organisations along with a limited selection of policy and regulatory sources directly relevant to hospital-based violence initiatives. This literature was compiled along with transcripts and other textual material and analysed using NVivo V12.0[45].

3.4.7 Online survey of NHS clinical staff

We distributed a secure, online survey link to ED and major trauma staff via an email sent from their host organisations. The survey asked a validated set of questions regarding clinical staff views of the implementation and embedding of a new work practice or process into their normal duties (Normalisation Process Theory).

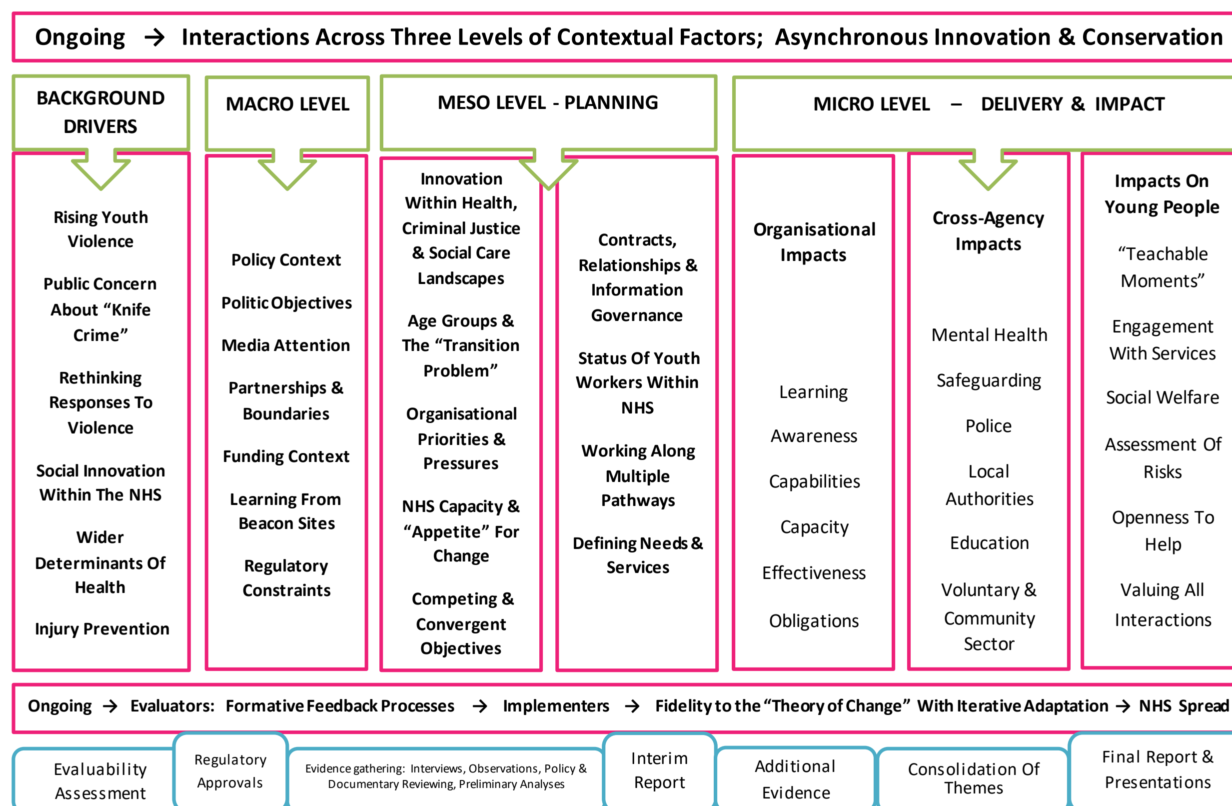
45 https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home

3.5 Theoretical basis for the evaluation

3.5.1 The Evaluation Logic Model

A visual representation of the evaluation objectives is included as a logic model (Fig 2). This outlines the interactions between various drivers and inhibitors for intervention spread and how contextual factors at macro, meso and micro levels interact.

Figure 2 A logic model representing the evaluation scope



3.5.2 Realism

Our approach was to adopt a realist stance to any factors which influence the adoption and spread of complex interventions in healthcare[46,47,48]. These factors include sets of personal and professional values, formal codes of conduct, regulatory frameworks and guidelines and established organisational boundaries. These combine to effect and affect the adoption and implementation of YVIPs within the NHS. Evaluators using a realist approach classically try to understand the effects of an intervention in the light of these structures to explain "what works, for whom and in what circumstances". In our case we are interested in the spread and implementation rather than its effectiveness.

46 Wong, G., Greenhalgh, T. and Pawson, R., 2010. Internet-based medical education: a realist review of what works, for whom and in what circumstances. BMC medical education, 10(1), p.12.
47 Allen, D., Gillen, E. and Rixson, L., 2009. Systematic review of the effectiveness of integrated care pathways: what works, for whom, in which circumstances?. International Journal of Evidence Based Healthcare, 7(2), pp.61-74.
48 Willis, C.E., Reid, S., Elliott, C., Rosenberg, M., Nyquist, A., Jahnsen, R. and Girdler, S., 2018. A realist evaluation of a physical activity participation intervention for children and youth with disabilities: what works, for whom, in what circumstances, and how?. BMC pediatrics, 18(1), p.113.

The actions of agents to interpret and implement policy and spread learning and acceptance of the YVIP are in fact almost entirely contingent on these structures and conditions. There is no straight road from macro policy to micro delivery. A further dimension to realism is recognition that some of these factors constrain our data by defining the context of each individual's professional and organisational roles, responsibilities and commitments. This creates bias arising from social expectation: a feeling of 'being evaluated'. It also leads to prior 'commitments' with regard to YVIPs: for, against or undecided.

To provide balance we talked to a wide variety of people across many disciplines and organisations in confidence. We were further conscious of the need to provide formative feedback to the intervention providers and NHS hosts at some inevitable loss of independence. Having said this we have tried to represent what we have found as faithfully as possible, to "bracket off" our own views and professional experiences as far as possible and to present a faithful representation of our data.

A key strength of a realist approach is then, to increase the usefulness of evaluations for those seeking to adopt innovative practices. However strong the research evidence base may appear for a complex intervention, implementation can be undermined by unacknowledged contextual factors and we have sought to include as many of these as we could. Social and professional structures also mediate the relative success of adoption and replication of generative causal mechanisms. So whilst supporting evidence of effectiveness from research is essential for spread, it is not sufficient.

3.5.3 A three-level perspective

To structure this complexity of contexts we have described how important factors interact across three levels: macro, meso and micro. This draws on studies of 'organisational behaviour' such as House and Rousseau et al[49] and healthcare services research[50].

At the macro level a complex healthcare intervention must fit within the policy and regulatory landscape including any historical precursors. At the meso level, organisational factors related to the YVIP provider, partners or hosts, partially define the processes and practices needed to succeed. Such contexts dictate how the intervention must be adapted from its original model to fit existing services and processes within each organisation. This risks loss of fidelity which could invalidate the theory of change or logic model and reduce or alter impacts. At the micro level, the outputs and outcomes of the intervention are realised in the day to day activities of staff and interactions with patients. By understanding how and why these operate and considering the macro and meso contexts, enables the creation of a useful evaluation. An example of how we attempted to combine realism with a three level explanatory frame of is shown in table 2.

49 House, R., Rousseau, D.M. and Thomas-Hunt, M., 1995. The meso paradigm-a framework for the integration of micro and macro organizational-behavior. Research in Organizational Behavior: an Annual Series of Analytical Essays and Critical Reviews, Vol 17, 1995, 17, pp.71-114.

50 Greenhalgh T, Shaw S, Wherton J, Vijayaraghavan S, Morris J, Bhattacharya S, Hanson P, Campbell-Richards D, Ramoutar S, Collard A, Hodkinson I. Real-World Implementation of Video Outpatient Consultations at Macro, Meso, and Micro Levels: Mixed-Method Study J Med Internet Res 2018;20(4):e150

Table 2 Example thematic analysis: the context of information governance and access at the three levels

Level	Contexts and barriers to spread	Interactions	Responses
Macro	National Information Governance policy and regulations (Information Commissioners Office, NHS policies) Commissioner requirements for process and outcome data Recent law change primarily General Data Protection Regulations (GDPR)	Sets context for meso processes (e.g. Trust level) Reduces "appetite for change" in host trusts as they are risk-averse	Development of generic documents in advance to assist implementation and reduce the burden of varying interpretation and duplication of effort Provide reassurance at the meso and micro levels Co-design GDPR compliant systems and processes with NHS hosts Aggregation of data for external outputs
Meso	Variable set-up processes at each trust Aligning details of proposed YVIP with Service Level Agreements (SLA) and employment contracts Information Sharing Agreements (ISA) Conflicting interpretations of GDPR requirements Access to data systems – essential to function in NHS Are youth workers inside or outside NUH?	Redthread are the linking factor with expertise from previous implementations Redthread initially struggled to capture data to underpin case of need, record all important activities and justify costs Aligned need for accurate patient record keeping and communication Change in information systems and record keeping practices over time	Develop plans for data capture and use which meet legal requirements and the needs of stakeholders Specific to each hospital information systems Manage the impact of data collection on youth workers and clinical staff prior to implementation Continuing review of processes via operational meetings
Micro	Overcoming initial limited ED staff capacity and awareness to refer Processes of information gathering, recording and communicating Attitudes of clinical staff have direct effect on the ability to deliver the intervention Attitudes of police, social service, criminal justice services and educational staff have a bearing on the quality and scope of the intervention delivered to each young person	Conflicts with meso and macro level constraints as youth workers are prevented from recording non-consented activity or outcomes Influences meso set-up processes by limiting what is possible Effects on patient safety/ continuity of care if youth workers cannot interact effectively via hospital information systems	Youth workers becoming self-sufficient in "case-finding" replaced by clinical champions maintaining referral activity Effective operational meetings allow understanding and two-way communication between RT staff 'upwards' in their organisation and 'laterally' with other NHS and community teams Improved delivery and assurance through effective standard operating procedures Development of local expertise and knowledge over time

None of these factors are directly explicable at any single level any more than implementation can be ensured merely because public pressure, a government department or a local clinical workforce demand it[51]. Organisations operating at the meso level can influence macro policy levels in a limited way but may even struggle to implement an intervention faithfully at the micro level they nominally control. This evaluation examined how 'frontline' staff, leaders and managers view the YVIP from their various perspectives and attempts to show how understanding these perspectives can help enable the provision of YVIPs becomes a routine part of emergency care.

3.5.4 Normalisation Process Theory

There is rarely an area of healthcare practice so new that innovators are presented with a blank slate. In addition to our interview and documentary data, we wanted to understand to some extent how ED staff had reacted to the implementation of the YVIP and how far they felt it had "bedded in". Normalisation Process Theory (NPT) helps to capture how far and how fast new working practices are taken up and to what extent they are then regarded as standard professional practice[52,53,54]. We have used it to take a snapshot of the views of staff but the survey could be repeated at intervals to monitor progress and tailor implementation work.

The questions are reproduced in Appendix 5. NPT uses four constructs: coherence (or sense-making of the intervention), cognitive participation (or engagement), collective action (or what is done to help make the intervention 'work') and reflexive monitoring (the formal and informal identification of 'cost' and 'benefit'). These constructs are dynamic and should be viewed against the wider context of the programme such as the organisational context and iterative adjustments and adaptations.

We asked participants how familiar they felt referring to Redthread youth workers, whether they felt it was part of their normal work and whether they felt it would become so in future. They could select a score from 0 to 10 with 0 representing the lowest level of familiarity with or integration into their role and 10 the highest. We compared average scores out of 10 across the 3 staff groups. A further 23 questions were each rated on a 5 point Likert scale from 1= 'completely agree' to 5= 'completely disagree'. Each question allows respondents to indicate whether the question is relevant to them or the particular intervention.

A link to an online survey was sent to participating hospitals to forward on to clinical teams via internal email. The data were analysed using descriptive statistics and cross tabulations of staff groups, levels of experience and whether they were a 'Redthread Champion' or not.

3.5.5 Thematic analysis and synthesis

A thematic analysis process was used to synthesise the interview, documentary and observational data[55]. Both researchers independently coded the first 12 interviews. This first-pass process involved highlighting any material we considered to have bearing on the aims of the evaluation or the contextual factors we had identified as important from background reading and set-up meetings. We arrived at an initial thematic structure jointly by discussion and refinement of our initial responses to the data. Subsequently, as further data were collected, we worked iteratively to find commonalities, divergences and resolve areas of conceptual ambiguity. Our results are presented under a final, simplified version of this framework as themes and subthemes.

51 Exworthy, M., Berney, L. & Powell, M. 'How great expectations in Westminster may be dashed locally': the local implementation of national policy on health inequalities. Policy & Politics 30, 79–96 (2002).
52 Murray, E., Treweek, S., Pope, C., MacFarlane, A., Ballini, L., Dowrick, C., Finch, T., Kennedy, A., Mair, F., O'Donnell, C. and Ong, B.N., 2010. Normalisation process theory: a framework for developing, evaluating and implementing complex interventions. BMC medicine, 8(1), p.63.
53 May, C. and Finch, T., 2009. Implementing, embedding, and integrating practices: an outline of normalization process theory. Sociology, 43(3), pp.535-554.
54 Finch, T.L., Girling, M., May, C.R., Mair, F.S., Murray, E., Treweek, S., Steen, I.N., McColl, E.M., Dickinson, C., Rapley, T. (2015). NoMad: Implementation measure based on Normalization Process Theory. [Measurement instrument]. Retrieved from http://www.normalizationprocess.org. & http://normalizationprocess.org/how-do-you-use-npt/survey-research/
55 Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), APA handbooks in psychology®. APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological (p. 57–71). American Psychological Association.

No stage of analysis was considered 'complete' before commencement of the next. The many interviews, site visits, meeting observations, critical reading of the policy and research literature related to hospital-based violence interventions, formative feedback meetings and initial report writing overlapped throughout the evaluation period. We revised interview schedules to generate more focussed questions sometimes adapted to the role or perspective of a particular interviewee. The set of themes and sub-themes were considered complete when all new data were being adequately accommodated.

Meetings with the delivery team were used to discuss and validate our findings and to challenge, and be challenged, on our emerging interpretations. We took our interview and observational data as our fundamental starting point and tried to avoid bias in the light of historical policy reviews and previous evaluations. This approach is often referred to as being "grounded" but Braun and Clarke argue that thematic analysis is not fully subsumed within this theory but is itself a "specific approach in its own right"[56]. Our data sources were not restricted to interviews and they form only part of the final report. They are not the only 'ground' and not especially privileged unlike more phenomenological qualitative work. The interviews did allow us to see how individuals understood the processes needed for spread and how the many contexts, roles and responsibilities exerted their effects but we were less concerned by what these factors 'meant' for each individual.

Our own perspectives as evaluators shaped our interpretation despite any appeal we may make to empiricism or 'groundedness'. Both of us have worked for the majority of our careers within the NHS and emergency care but each with varied professional, educational and research backgrounds. Neither of us has any background in youth work or criminal justice services. As a result our themes are constructed and prioritised for their direct application to emergency healthcare and the evaluation aims. Where relevant we discuss the YVIP within wider youth violence services although we recognise the great importance of this issue. For example we were interested in how the relationship between the YVIP and the police service affects the functioning of the YVIP within the ED environment and how shared perspectives could help to promote the service to these different audiences. This report is aimed at a health care audience in line with the aim to influence further adoption and spread in the NHS.

3.6 Evaluation Advisory Group (EAG)

An evaluation advisory group was created consisting of the two evaluators (PM and AC), The Health Foundation project mentor (MK), a lay member with a senior management background in the NHS, a public health professional and a senior figure with a criminal justice and academic background and recent experience in crime prevention work within the voluntary and community sector. The group has reviewed the findings of the study at various stages. Discussion within the group has been wide ranging and informative. In the final stages of drawing up this report the EAG meeting was opened up to various stakeholder groups to test and refine the conclusions and recommendations. At this meeting a draft of the executive summary and findings was circulated and AC gave a presentation of the study findings and recommendations. The meeting was recorded and participants also asked to contribute their views on the importance they attached to the differing proposed outcomes measures that might be used to evaluate the YVIP and how they viewed these as priorities from their own perspectives.

56 Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101.

4 Themes

We arrived at a set of themes and subthemes under which to group and understand our varied and extensive data. These are not the 'findings' in themselves as, without exception, they contain multiple perspectives and elements that promote and inhibit wider spread of the YVIP. A realist approach requires critical questioning (box 10).

Box 10 Critical questioning from a 'realist' perspective

How can psychosocial support, normally undertaken in community settings, be conducted effectively within an acute healthcare setting?

How can the YVIP be shown to be more effective than existing care in a way that 'counts' as evidence for many different stakeholders some of whom may not have collaborated directly before?

What shared understandings, practices and approaches were required to foster a collaborative approach amongst diverse professional groups to meet the needs of young people in ED?

Young people often require both physical and emotional care in ED which needs to be delivered quickly by many clinical and non-clinical services working in concert from the time of the original incident and onwards, after their discharge from hospital. Within this overall context our findings fall under some broad themes centred around 'mainstreaming' the YVIP within the NHS (box 11).

Box 11 Themes of the evaluation

- Young people and their needs in ED
- Introducing YVIPs into existing systems of care
- Policy, evidential and regulatory landscape
- The challenges of expansion and spread
- Sustainability

4.1 Young people and their needs in ED

Two related considerations lie behind the desire to spread the YVIP. The first is the recognition that attendance at ED represents a great opportunity to engage with a young person at a point of crisis where they might otherwise avoid, or at least not seek, contact with NHS or other services.

"most of us need a GP, most of us are going to need through our formative years either a health visitor, social services, walk-in and drop-in centres, A&E. I think that when your back's against the wall and you've actually got to access those services, you will do it. It's a greater chance to actually hit that target" – Police Officer

The second is the recognition that existing ED and MTC services are largely unable to identify and meet the psychosocial support needs of young people after adversity-related injury in a way that maximises the impact of a brief window of opportunity.

We found that recognition of the need for a dedicated service is growing but not yet universal. In 2013 the London borough of Brent identified that a number of young people requiring treatment after adversity-related injury had a variety of additional psychosocial needs and that they required a specific intervention within the hospital setting to meet them[57]. Redthread were already providing such a service at two sites in the capital.

57 NPC Associates 2018. Youth Violence Intervention Project: St Mary's Hospital. Evaluation report (unpublished).

"they [King's College and St Mary's EDs] decided quite early on – and I think they were probably earlier than most other acute ED departments, to include young people as victims of violence into their safeguarding framework" – Redthread Senior Management Team

The resulting youth intervention programme has four main aims (box 12).

Box 12 The aims of the Redthread YVIP

Achieving a reduction in "risky lifestyle" and involvement in violence and crime

Increasing "planned" access to support services

Increasing "awareness, understanding and engagement" amongst NHS emergency staff treating young people after adversity-related injury

Increasing "collaborative working and sharing of data"

These aims have been presented in a variety of ways and although they remain the core elements of the intervention the variability has led to a lack of clarity especially for NHS organisations considering adopting the YVIP approach as to the primary aims and responsibilities of such a service.

"[We were] looking at the models that were actually available and described two or three models which were dramatically different from each other." – NHS Senior Manager

Despite this we have found considerable unanimity amongst frontline NHS staff: there is a high level of unmet need for support which they do not meet and which is not addressed because of their focus on clinical care.

NHS staff often told us of their need for help in communicating effectively with young people on some occasions. This need arose both from a perceived lack of skill and time on the part of ED clinical staff. The youth worker acts as an advocate for the young person whilst presenting them with options for self-reflection and support. The hospital pathways can be complex and daunting to navigate, especially when the individual is seriously injured. The youth workers aim to be a voice for the young person in hospital, to help them raise any concerns and queries throughout their stay.

" Advocating for them whilst they're in hospital, staying with them, advocating with the Police, kind of, talking, trying to decode the sort of medical language that maybe the nurses and doctors are speaking to them." – Redthread Staff

"Making sure they've got safe discharge somewhere safe to go, that they can get home, that they've got clothes and then sort of working out action plan around practical support around their support needs." – Redthread Staff

Redthread explicitly aim to help the clinical team change their approach to young people and many clinical staff agreed that this was needed.

"I feel that we are making quite a lot of change within those departments we're all in to upskilling clinicians around that, you know, the fact that we are [contributing to] the mandatory safeguarding training for the entire Trust as well, so we'll have a slot on that." – Redthread Staff

The broad and variable inclusion criteria can lead to confusion as to the true target population and referrals are sometimes made which fall outside of the YVIP remit. Where this occurs the youth workers liaise with the clinical staff and make recommendations more suitable to the needs of the young person. The Redthread teams recognise the potential for confusion amongst clinical staff and spend considerable time feeding back and coaching staff as to which patients they can and cannot assist and this support was valued.

Redthread provide support for older individuals from the ages of 18-24. The youth workers are concerned that this is a difficult age group to get support for in the local community.

"Helping people that aren't safe put in place pathways I'm fearful of going home but because they're eighteen, they're compos mentis and you know they don't need physical care needs, "free to go mate", type of thing. So that's been really hard to say "look, is there nothing that can be done"? No, by that rule of law, they can go [. . .] so we've had to put measures in place to try and make them safer." – Redthread Staff

The YVIP assessment and safety planning processes are designed to help the young person reduce their risk of further harm. These activities are not currently part of routine care prior to discharge from ED for people in this age group. Each YVIP team builds a deep local knowledge of services and pathways. Finally, YVIP youth workers have the time and training to build effective relationships. We were told by clinical staff that these were all key contributions of the YVIP in ED.

This highlights the importance of some concerns that were raised with us during interview about the working relationships between mental health and Redthread staff mentioned above. We would recommend that these relationships and processes need to be clearly outlined in standard operating procedures (SOP) and training of both teams. Close liaison between mental health teams and the Redthread operational group should be maintained with suitable arrangements for clinical supervision to support this challenging area of the youth worker role.

4.1.1 Understanding and adaptation to local needs

The first step towards spreading YVIPs to new EDs is to synthesise understanding of the local needs of each distinct ED youth population.

"I think [it was thought that] we would be a good site to target, albeit that we weren't a trauma centre, 1) because of the numbers coming through the door; 2) opportunities to have the educational moments and 3), other than not having the neuro, we took most of everything else." – Senior NHS Hospital Leadership

The Redthread YVIP inclusion criteria include domestic violence and sexual exploitation. The case-mix faced by teams at each site varies considerably and we heard evidence that this will become more pronounced as the intervention is spread from established MTCs to smaller EDs.

"You know, it's quite a diverse city and our location for the MTC is quite an affluent location. . .–it's pretty well off, whereas the local hospital is a much more deprived area and you're going to get differences in cases because of those demographics." – Redthread Staff

Redthread have responded to this varying need but this has been at the cost of some increased ambiguity over referral criteria. Domestic violence is one such area. We have heard a variety of views from with the Redthread team and externally as to how far this falls within their remit. Where existing domestic abuse services are in place close working relationships have developed with Independent Domestic Violence Advocates (IDVAs) and specialist nurses. Where these services are lacking Redthread are developing expertise or recruiting appropriately to meet these specific needs.

"We would love to have that kind of specialism in every team, you know, it's something that we'd love to achieve. You could just see the difference in confidence and skill in the teams [where specialist support was available]" – Redthread Staff

In general we have observed effective working relationships between YVIP and other teams to support the needs of patients where these fall outside of the competence of the YVIP itself. The core focus of the YVIP remains dealing with patients following assault and violent injury at MTCs. With spread into smaller EDs this focus has broadened to some extent.

"In small A&E's, your location gets stabbings and shootings, most of it will be [criminal and sexual exploitation] overdose, self-harm, mental health and everything else, so you need a very different type of youth worker" – Redthread Staff

Some NHS clinical staff still view Redthread as "a knife crime intervention". Ensuring that wider eligibility is fully understood requires continual awareness raising and promotion of the service. This should include a reinvigoration of the local ISTV work with police and local authorities directly via the new VRUs and Serious Violence Reductions Networks being developed. The variation in the needs of young people in different EDs and the communities they serve, has also led to a broadening of Redthread youth worker training.

"It's been a bit difficult with our eligibility criteria knowing exactly who we do see, who we don't see because we don't get the major traumas here, it's not as clear-cut, as it were" – Redthread Staff

For example we were told that the YVIP is more likely to receive referrals for younger people within the eligible age range. As a result they put effort into educating clinical staff to refer people over school age who are vulnerable but who are less likely to be identified as they fall outside of normal safeguarding guidelines. Sometimes the link to criminal violence or 'knife crime' in the minds of NHS staff, was too restrictive.

"There was this connotation that we're only working with gang members" – Redthread Staff

Redthread have become increasingly adept at helping acute Trusts understand the level of need among their population prior to implementation. Such detailed work is only possible where there is adequate data available, a willingness from new sites to engage in scoping work and support funding to undertake it.

"so the initial [case of need] is really important and I think how you frame that in your institution is very, very important and there must be a buy in from the clinical staff and the admin staff that that service is core for it to be effective" – Senior NHS Leader

Redthread recently assessed the potential scope for a new service at a smaller Midlands ED funded by the local Police and Crime Commissioner's Office (PCC). (private correspondence). The work included analysing ED attendance data, assessing the education and support needs of staff, contact with local police and service providers and a review of options for a potential intervention.

ED data for the target age range for 12 months were analysed: over 200 hundred young people had presented after "assault" in the period (15 to 25 per month) often at weekends. The majority were male, injured in a public place with around 15% of incidents involving a weapon.

The majority of ED staff felt that their lack of knowledge and specific training meant they did not support young people as effectively as they wished to. A large majority said they would value training on identifying needs, what services they could offer and how to communicate effectively with young people and their families. Staff raised concerns about the volume of violence and exploitation within the home amongst their patients. They would also value feedback on the referrals they made to Women's Aid, safeguarding and CAMHS to ensure these were useful. The majority agreed that their patients could benefit from a YVIP to address these issues.

Contact with a local police representative revealed their concerns about increased knife crime, "county lines" activity, drug use and criminal exploitation within their area and agreed there was a role for a YVIP locally. Community service contacts were approached and half of these were already working with ED but some ED staff were unaware of local services. Such scoping projects provide valuable data to understand the needs of patients and staff and the feasibility of spreading the YVIP to smaller EDs. In this case the scoping work led to a proposal to provide support from a larger established YVIP subject to funding.

At some sites we were told ED clinicians had conducted such scoping work themselves. There was little such data in the academic literature or public domain. Audit data we saw focussed on clinical needs and interventions and did not include assessments of the psychosocial needs of young patients nor the training or support needs of staff. We would recommend similar scoping projects to assess the need for YVIPs in all NHS EDs. This would allow NHS leaders to better understand what a YVIP service could offer.

We were told that the spread of the YVIP approach is often predicated on the volume of the most serious injuries and takes less account of the domestic violence and exploitation aspects of young people in EDs. This is a direct result of the macro level contexts which were highlighted by many we interviewed and summarised in box 13.

Box 13 Macro level contextual factors identified most frequently by our participants

A 'political' desire to address high profile, weapons-related crime affecting young people

Chronically limited resources for youth-focussed interventions within existing local authority budgets and communities at most risk

Recognition that novel patterns of crime such a "county lines" present increasing challenges even in smaller EDs

Existing pressures in overcrowded EDs reducing the capacity of clinical staff to address the needs of young people

Many of our NHS interviewees understood these drivers but felt that a "whole system approach" was also required because of the broad range and scale of needs they had to deal with. The focus of the YVIP remains flexible to meet the needs of various populations at different sites and how these needs are met should remain a local decision informed by local data.

Summary

EDs without YVIPs currently already use assault data for anonymised sharing with the police – Information Sharing to Tackle Violence (ISTV). Combined with other patient information such as demographics and injury severity, these data can help Trusts considering implementing a YVIP to use this to understand the population of young people seeking treatment after adversity-related injury. Once a YVIP is implemented these same data can demonstrate the extent to which ED staff are identifying and referring young people.

Redthread are undertaking additional work in some areas to understand how to meet the needs of young people served by smaller EDs. We recommend that Redthread offer bespoke training to smaller EDs which cannot host a team in situ but have recognised a need for their staff to respond to youth violence and exploitation more effectively[58].

Redthread should be supported to help potential NHS ED sites understand their level of population need and what a YVIP would "look like" in each area. We found that this work was unlikely to be done by trusts themselves, was difficult to support from within Redthread resources and should be funded externally with a contribution from NHS providers.

Redthread youth workers' knowledge and experience of the local service landscape in each area is rich. This should be fed into local public health planning and joint strategic needs assessment processes. This could help the local system identify gaps in the provision of appropriate services or inadequate standards of existing services or any barriers to access.

4.1.2 Trauma-informed approach

A key feature of the YVIP developed by Redthread is their focus on uncovering the less obvious, antecedent needs of young people who attend ED in crisis and changing their approach accordingly. Such practice is widespread in many youth services but arguably less well understood or utilised in EDs. Underpinning the embedding of specialist youth workers into EDs was also the widespread agreement we found across professions about the 'causes' of youth violence.

"Inequality, poor life opportunities, parental education, parental history of parental incarceration, availability in childhood mental health services, schools, the quality of education, the quality of life opportunity, perception, and reality, consideration of basic Universal Income all sorts like that so because they're the real drivers of violence" – Senior Police Officer

58 Since this evaluation work was completed a YVIP at a smaller site is being developed deploying youth worker cover managed from a larger nearby site.

This widespread change in emphasis was seen as a supportive context for YVIP spread. Redthread's theory of change prioritises adopting a "trauma-informed approach" to the care of young people[59]. This means explicitly acknowledging the impacts of previous life experiences, ACEs and the specific crisis leading to their ED visit and dictates how assessments and supportive work are planned and delivered. We were told by a number of participants that this approach was becoming widespread in children's social care and the youth criminal justice system.

"I think we've got conversations happening there within youth justice there's conversations happening there and an understanding an awareness of what trauma is and how it affects people's behaviour." – Redthread Staff

We found support for this view in many of our conversations.

"who are the biggest influences in your life? School, your peers, siblings, your family, all those clearly trying to have an accumulative goal of being better than we currently are, working towards making [you] a better person" – Senior Police Officer

But we also heard the view from some with NHS leadership roles that such 'extended safeguarding' work should already be the responsibility of NHS staff, that "every" member of ED staff should be involved in safeguarding young people and should have the required skills to do this effectively without relying on a separate service or specialist staff: it is "everyone's responsibility". If this is indeed a view at the macro level within the NHS then we found deficits in training, skills, confidence and resources, to devote to the issue of assessing risk and planning support for young people at the micro level.

"[ED] we're not specialists in dealing with these things. So we don't have the knowledge or the awareness. So that is the biggest gap which they are filling, is basically the support…" – ED Clinician

Our interviews with NHS ED staff commonly revealed a relative lack of experience and confidence in addressing these wider needs and in delivering physical care in a trauma-informed way. Many highlighted the constraints of delivering emergency treatment, their limited local specialist knowledge of services and the potential barriers that simply being professional healthcare staff presented to young people. Even awareness of the needs of young people was sometimes low amongst ED staff.

"unless you're aware of it [YVIP] you don't realise the need for it because in ED you're kind of very much focused on the immediate management of the life-threatening condition" – ED Nursing Leadership

This lack of awareness and preparedness were amongst the original drivers behind the development of YVIPs.

"As a voluntary service provider, young people are given the choice to engage with Redthread, which can be very empowering. Their non-statutory status means that they are seen as separate from the police and social services, often making young people more inclined to engage in a meaningful way with support" – Redthread Standard Operating Procedure

Some clinical staff were concerned that NHS staff's perceptions of young people involved in violence had affected how they delivered care in ED in the past. Youth workers were seen as leading by example.

"when you see these young boys and girls communicating with people compassionately, our nursing staff stop thinking of them as being stabbing no.6, it's John, it's Roddy, it's Peter" – Senior NHS Clinical Leader

Certainly the youth workers that we talked to were continually aware of the supplementary role they could play given their freedom from many of the constraints placed on the clinical workforce.

"[Redthread] do that emotional practical work with the individual [which] usually sort of calms them and de-escalates the situation anyway. I think it's sort of the work that we're able to do humanises the situation a lot more I think sometimes, because we don't go with clipboards or pens or anything like that, so I think – and we have the capacity to sit there for a couple of hours, where other people, other professionals might not be able to do that." – Redthread Staff

59 Wilson, C., Pence, D., & Conradi, L. (2013, November 04). Trauma-Informed Care. Encyclopedia of Social Work. Retrieved 23 Apr. 2020, from https://oxfordre.com/socialwork/view/10.1093/acrefore/9780199975839.001.0001/acrefore-9780199975839-e-1063.

Summary

Outside of our interviews we found little previous evaluation data to demonstrate differences in the perceptions or engagement with care, police or other services, of young people at sites with a dedicated youth service compared to those without and could find no research on the effect of attitudes and beliefs of ED staff toward young people involved in violence on the care they delivered. Despite this many staff we talked to stated that having an independent youth worker available improved their ability to work with young people effectively through support and mediation.

Further detailed qualitative research work to understand how youth worker services in ED can improve the delivery and acceptability of care, would lend important support to the case for further spread of YVIPs.

4.1.3 Filling the "gap" in ED support

Given widespread agreement about the need to support young people after adversity-related injury and limitations of NHS staff experience with trauma-informed care, to what extent are EDs meeting these needs? Staff working in EDs with existing YVIPs were clear about the benefits to the service and how it fitted within existing services.

"once you start delivering early doors pragmatic support and you show you're going to have an ongoing relationship with young people and then they deliver that care and it's in concert with people delivering the clinical work, you've got a model of care that works" – Senior NHS Leadership Figure

We heard from many of our NHS clinical and non-clinical interviewees about the limited support currently available within ED or Major Trauma Services for the psychosocial needs of young people after violent injury.

"what we're not doing is using the teachable moments that are available and some of that may happen by well-intentioned and well-informed staff choosing to do it, but we have no programme, no consistency, no resilience, around that. So that's the gap as I see it" – NHS Acute Provider Leadership Figure

Redthread were early to identify this lack of provision from contacts with senior clinical figures in emergency care.

"time and time again [we were told by NHS staff] violence was the one presenting factor that didn't have other official referral pathways, other than social care" – Senior Redthread Leadership Team

We were told that in the absence of a YVIP, NHS staff were less likely to identify youths in need of support especially in older age groups. NHS staff did not have the tools, knowledge or resources to tackle the complex causes of youth violence in young people considered adults under formal safeguarding procedures. We also heard that at some sites there is limited face to face NHS specialist safeguarding work even for younger patients. Both NHS frontline staff and Redthread youth workers themselves feel that they are ensuring that some of the needs of young people are addressed that otherwise would remain hidden.

"we say to our [local Clinical] staff, if you see a young person and something just doesn't feel right, something just doesn't add up, or you just think this person's really vulnerable and there might be something going on but you're not sure what, we're happy to go and have that conversation and if it turns out to be for us then we can support them, if it turns out that actually another service is more appropriate then we'll signpost". – Redthread Staff

We were told that experienced ED-based youth workers are able to select appropriate points in the care pathway to talk to the young person, to liaise with friends and family and to help NHS staff and sometimes police officers to do their jobs more easily where tensions are high.

"it works both ways because the patients are happier patients, the parents are happier parents, they communicate more effectively with all staff, including the healthcare staff, we care for them better" – ED Clinician

In addition this engagement with wider family and friends can have other benefits in terms of identifying further sources of risk through to enabling the individual work with young people that youth workers delivered later. This level of engagement is simply not possible for clinical staff currently.

Redthread place great emphasis on local recruitment into their frontline teams. Most youth workers are under 30 years of age. It was suggested that this increases the likelihood that young people will feel comfortable being approached and supported. Casual dress, an informal manner and the lack of pressure created by the more formal relationship with professionals in uniform, were all suggested to us as ways that youth workers increase the chance of meaningful engagement with young people.

As there is no obligation for young people to engage with the YVIP it is likely that despite these efforts, some young people will feel uncomfortable accepting support in the hospital setting. We were told by community representatives that there was a degree of mistrust of the YVIP amongst some young people. The service was perceived by some in the community to work closely with police and other statutory agencies. We did not talk to young people as part of the evaluation and so found no direct evidence that this was a significant problem for the service. Despite this, many young people refuse help and it is important that uptake is monitored to ensure that any barriers to access are minimised. It was suggested to us that greater integration of YVIP providers such as Redthread within each areas unique network of community organisations supporting young people was important for their "credibility" and to increase the likelihood that offers of support would be accepted from anyone in need.

Redthread continuously work to better understand and respond to the needs of young people. The organisation has appointed a number of "Youth Ambassadors", volunteers who have been supported by the YVIP and are keen to influence and promote its work based on their own experiences of the service. Redthread continue to work through local fora to establish their service as a gateway to the wider net of services available to young people. This web of referrals, communication and co-operative working are the key to ensuring all young people can access support suited to their needs delivered in a way that they can accept right at the point that they are most in need.

Within the NHS we found a great deal of mutual understanding between NHS and YVIP staff at all levels. NHS senior clinical advocates continue to be of utmost importance in "spreading the word" to colleagues and influencing senior NHS leadership figures of the need for and merit of the service on an area by area basis.

"how do we engage with the communities to help change the environment? It needs to happen as well as what we do as an intervention in A&E." – Public Health Leadership Figure

We heard from clinical staff and other NHS teams who recognise their limited experience and knowledge of the social and psychological antecedents and consequences of the violence and this has been recognised elsewhere[60]. This lack of understanding could hamper the spread of the intervention if NHS staff are unsure of the effectiveness of psychosocial support. But key clinical staff we talked to were very aware that addressing psychosocial issues was vital.

"The group of patients which the Redthread team are involved with are a group which previously would have been discharged from ED, without any social input. As a result of this, we were unable to help this group of patients address the factors which commonly led to their ED admissions, often leaving staff feeling as though we were failing our patients to a certain extent" – Senior ED Clinician

This also hints at the possible positive effect on the morale of NHS staff who could gain reassurance that support was being provided even beyond discharge in a way that would not be possible without YVIP resources.

60 Fein, J.A., Ginsburg, K.R., McGrath, M.E., Shofer, F.S., Flamma, J.C. and Datner, E.M., 2000. Violence prevention in the emergency department: clinician attitudes and limitations. Archives of pediatrics & adolescent medicine, 154(5), pp.495-498.

We heard from participants both within Redthread and partner teams about factors about the delivery of the YVIP and in particular the youth workers themselves, which increase the likelihood of young people engaging. It was suggested to us that the perceived "independent" status of the Redthread youth workers is important to young people. This makes them more able to engage with young people in distress. Youth workers can help to bridge "distance" between the young person and NHS staff, police or other agencies in the emergency setting. It was suggested that this could help police officers directly involved in dealing with a violent or criminal incident.

This sense of "relatability" could also encourage young people to address their own psychosocial needs in a non-confrontational way which they might find difficult to do at a moment of crisis. We were told that youth workers were recognisably not part of the "mainstream" services young people were offered and that they were therefore more "approachable" and more "like" the young people they were trying to support. Clinical, safeguarding and police interviewees variously suggested that this assisted them completing their work by persuading young people to engage with services more fully.

"We're a barrier. The uniform, the name of the organisation, it's that automatic barrier and in some respects the NHS probably is as well because people see 'well, they're going to ring social care, they're going to do this, they're going to do that', but actually having that individual person who's a youth worker, who specialises in working with young people, it's going to have a positive impact and it would hopefully help a number of young people on their future pathway and the decisions that they're going to then make from then on." – **Senior Police Officer**

We were told informally of many direct and indirect benefits to young people and staff (box 14).

Box 14 Anecdotal examples of benefits from youth workers' presence in hospital settings

Greater likelihood of young people cooperating with the police and helping with investigations

Giving a young person a greater understanding of Police investigatory processes and providing support with steps in this process

Reducing the risk of self-discharge from ED or wards prior to receiving treatment

Directly receiving comfort and support during treatment

Assisting in the management of tensions amongst friends and family in distressing circumstances

Capturing the importance of such effects quantitatively is difficult but they form an important part of the case for extending the provision of YVIPs and could be underpinned by case-studies and through dialogue between services. The evidence we heard from frontline staff was that these benefits were real. Local consultations and canvassing opinions across organisations in areas with and without YVIPs are important steps in spreading such experiential learning.

Summary

NHS ED staff expressed a lack of knowledge, expertise and capacity in dealing with the complex needs of young people in their care. Redthread have updated their risk assessment processes to include exposure to sexual exploitation, adverse childhood experiences and personal and psychological risk arising from social media and online activity. Currently these risks are unlikely to be identified by clinical staff where formal safeguarding is not indicated. Many youth workers have received specific training in these emerging threats and this is expertise that they can share with NHS clinical staff.

4.1.4 How YVIPs work within EDs

There is a considerable body of experience about how to implement YVIPs in EDs. Redthread have learnt a great deal about how to establish their service working directly alongside NHS staff delivering emergency and major trauma care. To enhance our understanding of the views of ED staff about the presence of Redthread youth workers we used a validated survey instrument (Appendix 5) based on Normalisation Process Theory (see above).

The online survey was live for six weeks and there were 96 responses representing around 15% of the staff contacted at three ED sites with YVIPs. We asked participants to tell us their role and how many years they worked in either ED or MTC wards. Our sample was varied but we were unable to assess selection bias (table 3).

Table 3 Normalisation Process Theory Survey responses by role and tenure

Years in ED or Major Trauma Role	Role in ED/MTC	N=96
Up to 2 yrs	Medical	9.4%
	Nursing or Advanced Practitioner	15.6%
	Other	4.2%
3-10 yrs	Medical	9.4%
	Nursing or Advanced Practitioner	33.3%
	Other	7.3%
> 10 yrs	Medical	4.2%
	Nursing or Advanced Practitioner	15.6%
	Other	1.0%

Nurses were the most familiar with the YVIP and expected to be so in future suggesting that a focus on awareness raising and training for medical and "other" groups of staff could increase the numbers and specificity of referrals (table 4). This is particularly important if youth workers are not able to screen and approach suitable patients directly but must await (or prompt) a more formal referral. There were a small number of responses from non-registered members of the clinical team and those with administrative but patient-facing roles. Unsurprisingly these members of staff were less likely to be familiar with the YVIP. Redthread staff told us they would be keen to encourage enquiries or prompts from these groups of staff if it increased access for young people in need.

Table 4 Familiarity with Redthread processes by role

Normality of working with Redthread	Role in ED/MTC	Mean score out of 10
Are you familiar with referring to Redthread?	Medical	5.23
	Nursing or Advanced Practitioner	6.45
	Other	3.11
Does this currently feel a normal part of your role?	Medical	5.68
	Nursing or Advanced Practitioner	7.09
	Other	3.89
Do you feel this will become a normal part of your role in the future?	Medical	7.73
	Nursing or Advanced Practitioner	8.22
	Other	4.13

The final part of the online survey asked in more detail about the views of staff on aspects of the YVIP at their site. We report the results for each statement in table 5 aggregated into 'agree', 'neutral' and 'disagree'. One respondent answered all statements as 'not relevant to my role' and was excluded. Where participants reported the statement as 'not relevant to the intervention' these have been included as 'neutral'.

Table 5 Staff agreement with survey statements

NOMAD Question N=95	Disagree or strongly disagree n	Neutral or "not relevant" n	Agree or strongly agree n
I can see how Redthread differs from usual ways of working	1	15	77
Staff in this organisation have a shared understanding of the purpose of Redthread	5	12	77
I understand how Redthread affects the nature of my work	3	10	78
I can see the potential value of Redthread for my work	0	3	89
There are key people who drive Redthread forward and get others involved	3	17	74
I believe that participating in Redthread work is a legitimate part of my role	0	6	84
I'm open to working with colleagues in new ways to use Redthread	0	2	91
I will continue to support Redthread	0	1	94
I can easily integrate Redthread into my existing work	2	15	74
Redthread disrupts working relationships	89	6	0
I have confidence in other people's ability to utilise Redthread	13	27	55
Work is assigned to those with skills appropriate to assist Redthread	7	40	39
Sufficient training is provided to enable staff to work with Redthread	27	28	36
Sufficient resources are available to support Redthread	15	34	38
Management adequately supports Redthread	4	32	52
I am aware of reports about the effects of Redthread	17	13	64
The staff agree that Redthread is worthwhile	0	6	89
I value the effects that Redthread has had on my work	2	7	80
Feedback about Redthread can be used to improve it in the future	0	4	88
I can modify how I work with Redthread	1	26	62

The results of the survey represent a high level of engagement and acceptance of the YVIP amongst ED staff. Positive sentiments were endorsed by the majority with very low levels of negative responses overall. Most respondents agreed that they understood the intervention, that it formed a valued and worthwhile additional support for their work with young people and that it represented a new way of working suggesting that staff considered the YVIP an improvement on previous support for young people. A larger proportion of respondents were neutral about the level of support for the intervention in terms of training, colleagues' understanding of the intervention and the resources available to support it. These points echo one or two of the free text comments which refer to a lack of availability of youth workers at the times they were required but this was a minority view. There was some disagreement that staff were aware of the effects of the YVIP and again this is reflected in free text comments asking for more feedback on specific referrals and other outcomes delivered by the service.

There are limitations to the online survey approach we took. As with interviews, all participants are volunteers and given the low response rate it is likely that views are biased with predominantly positive responses reflecting self-selection of those well disposed toward the YVIP. The overrepresentation of YVIP 'Champions' (n=13) responding also suggests such bias.

This survey represents a cross section of views at a time when the service is relatively established at the three sites. We would recommend that Redthread consider using such an instrument at different stages of deployment at new and existing sites to understand how engagement is progressing, across which groups of staff and to target resources accordingly.

In line with the survey responses some participants raised capacity issues at NHS host organisations. This was mentioned both in positive terms of the YVIP providing valuable support to staff but also as a barrier to implementation. We heard that departments were struggling for space to deliver physical care and essential support functions within ED footprints. Concerns over whether YVIP activities and processes would have an impact on ED performance, primarily the four hour access target, were also raised.

"The main concern was for our targets. So if we refer a patient to Redthread, but the clock is still ticking, and then how that will affect the four hour target" – ED Clinician

Recent years have seen widespread deteriorations in Emergency Department performance due to high demand, increasing intensity of investigations and treatments and lack of onward "flow" into hospital inpatient areas[61]. Such pressures can translate into reluctance to expand non-clinical activity such as introducing a YVIP.

"When the CQC and [Local Partner] and [NHS performance monitoring function] came and looked at us, they said 'you're trying to do too much in ED'. So it would be counter-culture [sic] to say we're going to keep people in ED to do the [YVIP] there" – Senior NHS Manager

But relocating YVIPs elsewhere in the hospital could affect the Redthread model of responsiveness in the "teachable moment". The service is predicated on providing access to young people who may be discharged from ED and therefore needs to be integrated within it.

For these reasons YVIP youth workers take an opportunistic approach, delivering the intervention around and alongside clinical care. Their familiarity with ED allows them to exploit "downtime" in assessment and treatment processes, making initial contacts where possible but sometimes delaying their assessment processes until a suitable point in the patient journey and in the meantime, helping to support clinical teams by for example, working with family and friends to reduce pressure on clinical staff or gather background information.

We were careful to seek negative opinions from ED staff about such difficulties. We found no evidence that the YVIP had negative impacts on ED performance at sites where the service was already operating but some concern from potential adopter sites. The response of one busy department has been to address this at a system level and include the intervention as a core process.

61 King's Fund NHS Quarterly Monitoring report July 2019 https://www.kingsfund.org.uk/publications/how-nhs-performing-july-2019 last accessed 14/04/2020

"our metrics and our service have changed so that you can't go home until you've been seen by one of [the YVIP workers], you can't go home, even if they say "safe to go home", you can't go home until you've got a plan to go onwards, or you decline care on more than one occasion" – Senior NHS Clinical Leader

Summary

Redthread now have a deep understanding of how their work can fit within busy EDs. This learning is being used to drive further spread. Existing sites demonstrate the service working in practice and NHS organisations should measure and make available data on the YVIP impacts to capitalise on this. Each YVIP service should work with senior NHS staff to ensure young people in need are identified reliably and as soon as possible during their ED visit.

YVIP spread could be accelerated by the development of 'communities of practice' for youth work and or prevention across Emergency Staff in NHS Trusts. Towards the end of the evaluation period one NHS ED site began to develop a "prevention hub" to co-locate and coordinate clinical health promotion services including alcohol and drug specialists within their department. The YVIP will also be relocated to the hub to increase integrated working, facilitate rapid identification and assessment and help deliver multiple interventions for young people with complex needs.

We were also told that clinical staff engagement was often dependent on feedback of information on referrals and outcomes of young people. Redthread use personalised feedback to individual NHS staff where possible to increase understanding and engagement.

EDs should treat referral to the YVIP as a core performance metric: at some sites, staff were regularly informed of missed referrals and this was actively managed by clinical leadership teams. At other sites this was left to the YVIP team themselves or communicated via newsletters which may be less effective.

4.2 Introducing YVIPs into existing systems of care

Youth Violence Intervention Programmes can be characterised as a 'screening and brief intervention' in the language of healthcare. To be most effective they need to be well embedded within the network of existing services to support young people in achieving long term change.

4.2.1 Local organisations and third sector provider landscape

Our interviews suggest that Redthread had managed to successfully integrate the YVIP into the wider network of community services beyond ED.

"From what I've seen it's a really valuable addition to the service [locally] so it's something that you know should be available, certainly in the sort of regional, the bigger cities and the regional departments" – Community Support Services Provider

Hospital-based YVIP can only work effectively when integrated within the local service landscape allowing them to direct young people in need appropriately. We have heard evidence from youth workers, local authority, voluntary and community sector sources of the large range of organisations with which the Redthread YVIP work closely to refer young people in need of specific types of support.

"I would suggest of all our community points, [Redthread] are the most prolific, for want of a better word, as far as making referrals into our service" – Community Support Services Provider

Good working relationships and referral pathways have been created with housing associations, victim support providers, domestic violence organisations and restorative justice services amongst many others. We have heard from community providers that both the quantity and suitability of referrals from Redthread youth workers has allowed them to increase their activity and impact. Many community services are able to continue work initiated at a very early stage within the hospital.

"[Redthread refer young people] who are, have clearly been victims of some fairly serious crime and there's, [. . .] a need and a drive to reduce the chance of them being victims again in the future" – Community Support Services Provider

We have also heard of instances where it has been difficult for the YVIP to work with some external partners. The reasons for this are complex and we could infer no pattern to these problems from our interviews. Effective working relationships have occasionally been difficult and time consuming to achieve despite many shared aims and objectives. The essential requisites of developing relationships include having shared aims and objectives, clear proposed mechanisms for having positive effects on young people referred and the presence of clear quality assurance and procedures but this is not always enough. Each local area has its own partnership groups consisting variously of community and voluntary organisations, local government, police, education and public health bodies that meet to collaborate on tackling youth violence and knife crime. Examples of these groups from Nottingham are: the Serious Crime Reduction Unit and Ending Gang and Youth Violence Network. This is a very complex network of groups and bodies in many areas and engaging with all such groups is a challenge for smaller organisations.

"[Redthread] identified a need, and quite an acute need, and the more we see it in the press, the more that need gets felt. But, they have probably been fairly isolated in terms of how they take that work forward, and that's for all sorts of reasons – whether the system isn't mature enough to actually pick it up as a system" – Public Health Manager

The advent of VRUs should help to simplify and deepen such engagement but it remains a significant call on resources from each small YVIP team and central Redthread management. The need to coordinate and quality assure smaller local providers to enable them to take referrals from an NHS-based YVIP was recognised by local leaders.

"[we are planning] a project support/programme development type person to work with the third sector to strengthen their individual project capacity, so to help them be a bit more professional around some of the things they do and give them some of the business acumen that they haven't got and actually do some of the stuff for them to put them in a stronger position to receive referrals from people like Redthread" – Senior Local Authority Staff[62]

We have heard that Redthread have to use considerable local resource to develop these links. The complexity of the service landscape also appears to be an important factor.

"they were servicing 25 boroughs, so that's 25 [. . .] 25 children's Social Care teams, all of which have their own very individual structures" – Senior Redthread Leadership Team

These problems have generally been overcome as implementations have matured but the resources required to develop and maintain effective relationships are considerable and have often fallen on individual YVIP staff in the past. Redthread also employ quality assurances processes for safe and effective partnership working. Due to the complexity of the landscape of social provision they do not have rigid or prescriptive set of quality requirements for NHS or community partners. Rather they assess each potential partner on merit from available information and choose which organisations they consider meet their requirements for safety, quality and demonstrating a "trauma-informed approach" to young people. A suitable forum, perhaps facilitated by the VRU where they exist could help build collaborations as summarised in box 15.

62 We observed at workshops where the VRU were training voluntary and community groups in skills to deliver quality assurance and evaluation of their services.

Box 15 A local forum could help build collaborations

Set-up and maintain links between local acute hospitals, local authority organisations, third sector and YVIP services

Increase the speed with which the programme can be established and begin to have an impact across a population

Oversee quality assurance functions and allocation of resources to reduce the appearance of competition amongst local third sector providers

The Redthread YVIP services work to develop detailed local knowledge of the local service landscape. We have seen how this knowledge can inform monitoring and planning activity. This feedback should be replicated in each new locality adopting the YVIP in their ED given the level and complexity of need amongst young people in each area. We were frequently informed about the scale of demand for youth services into which schemes like the YVIP could refer.

"I mean, nationally, we still have a crisis around the amount of young people who are exhibiting some kind of symptoms of, you know, really severe anxiety, paranoia, stress from, you know, what they've witness from a violence perspective and what they're living that don't hit the mark up to get sort of counselling. So there are, you know, lots of services, Third Sector organisations that are trying to address this but they're small, they're under resourced and there's still, I mean, definitely. . . it's a problem, there's still this gap" – Local Authority Youth Work Professional

Another factor affecting spread we revealed is the receptivity of existing local networks of services to new entrants. The establishment of YVIPs is often affected for good or ill, by the quality of existing partnership working with an area. The available policy and academic evidence and our own interview data suggest that close liaison between health, local government and police services is a reality in some places. We directly observed such collaborative working with many meetings including representatives from across the spectrum of professionals involved with vulnerable young people. In other areas key services such as public health or NHS partners or new structures such as Integrated Care Systems are less engaged or absent from discussions about youth violence and how to respond to it.

This is a challenging and broad issue. We have seen evidence of a considerable burden on relatively small organisations such as Redthread to:

- Participate fully in all of the relevant local fora
- Agree safe and effective ways of working with numerous separate organisations
- Navigate complex local authority boundaries and referral pathways
- Understand the complex systems through which third sector organisations are required to engage especially within new integrated care systems

The difficulties for new sites implemented outside of the capital are also likely to include:

- Geographical variations in availability of support services to refer into across the large catchment areas of MTCs
- How activity and therefore resources are allocated to the YVIP from across various hospitals in a trauma network as a result of cross-referrals and "repatriation"
- A lack of existing collaborations or experience with violence prevention work within the NHS

We have repeatedly been told that effective local collaborations improve the demonstration of measureable benefits across each system by creating data sharing arrangements and shared learning. These have profound implications for sustainability of new YVIP sites. That YVIP providers navigate these complexities on behalf of the NHS, in effect, represents a further indirect benefit for the health sector.

One rarely acknowledged barrier to collaboration we noted seems to be a sense of competition especially between organisations involved in violence reduction or more widely, in providing services to young people in each locality. This had at times affected joint working with hospital-based YVIPs and reduced acceptance of the new service by some in the local community also involved in youth work. These problems were sometimes self-perpetuating and occasionally entrenched although the original or continuing causes of disagreement were often unclear.

Where we found evidence of such 'localism', competition and mistrust, this was organisation-specific and unrepresentative of the integration of YVIPs into the local landscape. Strong local leadership and mediation is required to ensure that the whole system works seamlessly for young people. Some of these sentiments are likely to be an inevitable by-product of innovation and churn in a complex and overlapping service landscape. Reducing this friction to a minimum would seem to require active management from umbrella groups such as VRUs. We saw that these are well placed to mediate and deliver a coherent package of complementary services and pathways given that their staff have often longstanding involvement in violence reduction and youth work in their patch. Evidence from other similar YVIP implementations (e.g. the Scottish experience) also suggests that strong local umbrella bodies improve the cohesion of multiple organisations working toward similar aims but through differing methods.

It is important to understand and mitigate any perceived or real barriers to young people accessing services via the YVIP. Acceptability of the YVIP service by all community groups and thus all young people is important for its sustainability. Youth violence reduction workers place considerable importance on ensuring deep understanding of the network of local services and in most instances we observed or were informed of, very effective working relationships.

In some cases the Redthread youth workers are unable to refer young people to a suitable service locally. This appears more often due to a lack of suitable services in a locality than to problems with partnership working. The lack of specialist services over larger, more rural areas outside of the capital has sometimes been an issue for the Midlands teams. A thorough audit of existing services and providers prior to launching new YVIPs is a key requirement for establishing levels of need and planning services in new locations. This will be helped by the establishment of VRUs who can identify and coordinate local services.

Summary

YVIPs need to provide routes into a wide variety of local services to ensure the support that young people need continues once they leave hospital. Creating referral pathways can be difficult where services are fragmented or lacking and it can be time consuming for local teams. Collaborative relationships between providers in each local system are vital. The establishment of VRUs provides an opportunity to ensure services can work together to support young people.

4.2.2 Structures, boundaries and agreements for partnership working

Considerable resources are required of Redthread centrally and locally, to negotiate ways of working with NHS patients that integrate them as closely as possible within hospital clinical and safeguarding teams. We have reviewed a number of Standard operating procedures and other governance documents in addition to analysing interview data to understand how these negotiations have shaped the delivery of the service in practice. Many of the constraints on local operations originate in macro level regulatory frameworks but variations in local interpretations at the meso level appear to be an important factor affecting working practices and operational effectiveness of the YVIP.

The basis for local data access and sharing for care are NHS policies which ensure effective care delivery whilst operating within the law. NHS England's policy on information sharing[63] makes this aim explicit:

- "[government policies support] the need to share information across organisational and professional boundaries, in order to ensure effective co-ordination and integration of services" p5

The Caldicott Review published in 2013[64] 'To share or not to share' specified that:

- "the duty to share information can be as important as the duty to protect patient confidentiality" p4

Finally the NHS Constitution itself includes a pledge to:

- "ensure those involved in your care and treatment have access to your health information so they can care for you safely and effectively" [65] p8

Apparent confusion or interpretation of these principles at the meso organisational level has sometimes constrained the YVIPs and required the creation of 'work arounds' to enable referrals and ensure safety. Solutions have varied between sites but processes are now more developed and consistent as Redthread have learnt from experiences. Initially during the setup of YVIPs in the Midlands negotiating acceptable ways of working and giving access to patient information for youth workers placed a burden on clinical staff to identify and refer patients. This worked against a core intended impact of the YVIP being sited within ED to reduce this barrier to accessing support for young people. This appeared to be related to the relative 'external' status of YVIP staff within NHS organisations. Redthread employees are employed on honorary NHS contracts and are therefore seen by some Trusts as remaining outside of the core NHS workforce.

"They aren't [NHS] employees though, they're Redthread employees, so that's been slightly complicated in terms of access to information. So I think if we were to do it again we would think carefully about how we set up the contracts and employ the Redthread working team because I know that's been an issue in terms of accessing patient data and records and therefore their ability to update records I think there's still potentially an issue" – **Senior NHS Manager**

Each Trust has to some extent, interpreted information governance and contractual restrictions differently leading initially to multiple and sometimes ad hoc ways of working in each setting. Overall this has reduced Redthread youth workers' access to patient data especially live electronic patient systems and reduced their ability to help clinical staff identify young people in need. Where possible, clinical records access has been used to enable proactive screening by youth workers, reducing their reliance on referrals from busy clinical staff. Reducing access to clinical information systems may serve to increase barriers to young people accessing the service.

"I think they were picking up a lot of their referrals through going through patients who'd come through, rather than a team in resus thinking of them straight away and it being an automatic thing" – **Senior NHS Manager**

At some sites there were significant delays in addressing requests for data permissions and advice on how Redthread should be operating within clinical teams. Over time these issues were largely resolved and during the course of this evaluation Redthread have appointed an "external data protection officer" to review their internal and local practices. This has helped them understand and meet the various demands and restrictions placed on them at different sites.

We heard that the advent of GDPR in 2018 had also led to some confusion in NHS sites about whether and how information should be exchanged with external provider teams. One particular concern for NHS IG managers was the use by Redthread of an external database system. All NHS partners require written patient consent be obtained before identifiable data can be recorded on such systems. GDPR also establishes new rights for data subjects meaning organisations must be able to respond to access requests and corrections. Our impression was of a disconnect between NHS IG functions, ED management teams and Redthread to resolve these issues early on at new sites.

63 NHSE Information Sharing Policy v4.1 September 2019 Corporate Information Governance, NHSE and NHSI https://www.england.nhs.uk/wp-content/uploads/2019/10/information-sharing-policy-v4.1.pdf last accessed 30/04/2020

64 Available to download from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/192572/2900774_InfoGovernance_accv2.pdf

65 The NHS Constitution 2015 Department of Health https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/480482/NHS_Constitution_WEB.pdf

To enable YVIPs to embed effectively, standardised Information Sharing Agreements (ISA) and Data Protection Impact Assessments (DPIA) should be used to set out the processes to be used within the clinical setting and their potential impacts on data security and privacy for patients. The purpose, scope and limitations on youth workers' data access and use should be clearly justified and agreed in a way that maintains timely access to the service for young people. We did not always see evidence of NHS information governance teams working sufficiently closely with YVIP managers to address these barriers quickly and at a high enough level. This imposes another burden on Redthread and the ED clinical teams teams to negotiate and implement uniform and reliable processes for screening.

Internal Redthread and NHS guidance documents we have seen stress that YVIP referrals should not replace statutory safeguarding referrals or other standard processes especially for younger patients. In practice, we heard that youth workers were proactive, eliciting YVIP referrals from ED staff but also prompting clinical staff to refer on, for example to Mental Health teams to which they themselves cannot formally refer. This was often as a result of information or concerns emerging as a result of the extra time they could spend with patients compared to clinical staff. Clinical supervision of youth workers and regular liaison with safeguarding and other teams also helped ensure that collaboration across teams was under constant review.

Redthread have set up "operational" and "steering" groups at each site. We heard evidence of variable local involvement in the management of the service by organisations outside of the NHS at different sites. Time pressures and shift patterns also made consistent attendance at operational and steering groups difficult for NHS clinical staff. Attendance and non-attendance patterns tended to stabilise with considerable effort from Redthread needed to refresh representation from stakeholders over time.

Despite these problems we observed strong collaborative relationships enabling the delivery of safe and effective services locally. The system of two levels of group meetings at each site appears to function well. Regular operational group meetings provide monitoring, communications and problem solving functions whilst steering groups met less frequently but allowed leadership engagement across services, key to planning for service resilience and sustainability.

Relationships at the frontline are enabled and conditioned by the policy environment in which they are enacted. We reviewed some of the documentation arising from local NHS sustainability and transformation plans. We used our interviews to understand the possible impacts on and potential for, the provision of youth violence reduction services. It was suggested by participants in public health and at strategic levels within some organisations, that the development of "place-based" and "integrated" systems of care could increase the incentive and ability of health, local authority and public health bodies to cooperate more fully to meet young peoples' health and social support needs and to innovate and improve services to address complex issues in policy areas such as community safety.

"with the emerging integrated care systems, and the integrated care providers that fall into that. We are starting to work as a system, we're starting to look at the place based approaches and we're starting to look at neighbourhoods as a system." – **Public Health Leadership Figure**

We found little detail as to how these ideas would be advanced but agreement that the direction of travel should provide a helpful context within which to develop and spread hospital-based YVIPs and the collaborative working needed to sustain them.

We found support for this in policy documents:

"At least in theory, the establishment of accountable care systems in England presents an opportunity to address many of the barriers to adoption and spread identified here and establish organisations with stronger mechanisms for sharing learning and improvement."[66] *p12*

Each local YVIP is situated within a complex network of NHS and external services which influence implementation at the meso and micro levels. These also operate as a set of relationships which influence the day to day functioning of the service. Such relationships should become easier to establish and maintain as services integrate over whole populations and the wider determinants of health receive greater attention in health service thinking.

66 Ben Collins 2018 Adoption and Spread of Innovation in the NHS. Report, The King's Fund, London

Summary

The NHS should adequately resource managerial and clinical time to setup and monitor the implementation of YVIPs including technical and IG support. Dedicated project management at each NHS trust would ensure implementation is efficient and that contractual, human resource, information technology and information governance problems are resolved quickly.

Greater acceptance by new NHS host sites of model agreements, standard operating procedures and other governance arrangements developed during previous implementations would ensure more rapid spread to other sites leveraging cumulative learning.

The VRUs Network should lead on developing a "toolkit" or similar implementation approach to guide NHS providers towards achieving violence prevention goals and enabling new YVIPs to work alongside existing NHS services. We found that they are making a strong case for how the NHS can contribute to wider public safety and health improvements within emerging integrated care systems.

Creating and maintaining effective operational and steering groups at each site are key to enabling the YVIP to operate effectively internally and across the wider health and social care system, respectively. Additional NHS clinical resource is required to ensure clinical engagement with these groups within the constraints of rotas and managerial work to ensure NHS clinicians can play a full role in supporting programmes.

4.2.3 "Shop floor" Relationships

At the macro level there have been many calls to embed violence reduction within health services at the point of delivery. The World Health Organisation's "World Report on Violence and Health" includes a recommendation to introduce widespread training for health workers to "identify and refer youths at high risk for violence"[67]. The relationships created with clinical teams at NHS host sites are of primary importance for the effective implementation of YVIPs and the delivery of such training. Given that the intervention has spread sometimes by clinical 'word of mouth' these relationships also have implications for future spread.

The Redthread YVIPs aims to raise awareness and build the skills and confidence of NHS emergency care staff to intervene to support young people after violence and other adversity-related injury.

We found considerable evidence from interviews and observations that the Redthread youth workers worked effectively with the clinical staff within the emergency and major trauma services from the outset.

"integration into the team in ED wasn't a problem at all, they were welcomed with open arms"
– Senior NHS Manager

Further integration within the clinical team, attending ward rounds, handovers and case reviews for example, have all been employed by Redthread to increase the visibility of youth workers at sites, ensure that they act as a visual reminder of the service as well as directly prompting referrals from clinical staff.

"that's why it's really important to work 7.30 and 1pm till 9pm, so you're picking up the morning and evening handover shifts" – Senior Redthread Leadership Team

Maintaining this visibility places a strain on YVIP resources[68]. At times where there is a heavy case load, where case workers have external visits and meetings to attend, visibility can be reduced. We saw evidence of considerable coordination to maintain a presence within clinical areas but it was less clear how this was monitored over time at sites and central to understanding how YVIPs meet demand and ensure access to the service.

67 WHO (2018) World Report on Violence and Health: Chapter 2 Youth Violence. https://www.who.int/violence_injury_prevention/violence/world_report/en/
68 Our data collection was completed before the impact of Covid19 suspended face to face services and this report does not address this period and the impact on referral of losing the presence of youth workers in the early months of 2020.

Redthread teams typically comprise two or four youth workers making them vulnerable to reduced staffing and reduced access to the programme. We observed that at times team leaders would take on case work or carry a case-load as part of their role. Reductions in service continuity occasionally led to confusion for the clinical staff and reductions in referrals.

"We've had a staff member go off, we've had to go close the door, open the door, close the door, open the door. . . from our perspective. . . Our signals haven't been clear" – Redthread Staff

We saw how that sites reviewed referral data regularly to ensure that access to the service was offered as widely and in as many ways as possible. Development of "re-entry" routes into the service for those who have attended out of hours, at peak periods or were otherwise not engaged in person could be an important step in increasing referral and uptake further.

We were told that considerable youth worker resource is devoted to offering support to clinical staff, via informal case discussions and sometimes resolving the different professional viewpoints about the care of each young person needed to deliver a broad support package. We heard from clinical staff that the Redthread team form an important line of communication between patients and staff advocating for the perspective of each.

"The team sometimes feel like a bridge between patients and clinical staff which benefits all involved" – ED Clinical Staff

ED clinical staff have found the Redthread team to be responsive and adaptable offering rapid advice on referrals, reiterating the inclusion and exclusion criteria.

"if one of the nurses is not sure whether to refer, whether they fulfil the criteria, they are very good at just helping them out, and explaining. So that is sort of an informal way of teaching anyway" – Senior ED Clinician

We found some evidence that some staff still struggled to understand who and who should not be referred.

"...the nurse that was treating him was just like 'oh well he's not a member of a gang, I didn't think he'd be someone that you work with'..." – Redthread Youth Worker

As discussed above, where youth workers do not feel a young person's needs can be accommodated within the YVIP they can signpost to more appropriate services and inform the ED team appropriately.

"The team are all approachable, friendly, and quick to respond to any queries or questions ED staff might have" – ED Clinical staff

We were told that more feedback to individuals on occasions could help where NHS staff have not been clear why a referral has been rejected but overall this appears to be rare compared to the level of 'missed' referrals i.e. young people who could benefit who are not flagged to the YVIP team.

The YVIP services provide cover for different hours at the various sites and this is regularly reviewed at operational meetings. We heard that on occasion youth workers were not available when needed especially overnight. It was recognised that such small teams could not be available whilst also delivering programmes of work within and outside the hospital during office hours. We heard that YVIP teams were sometimes "stretched" by the volume or complexity of work and that there was limited capacity to meet occasional peaks in demand. This is a perennial issue within emergency care and no easy answers present themselves to matching workload to demand cost-effectively.

We observed that youth workers are accessible from the clinical areas via multiple referral pathways at each site. Referral pathways and their responsiveness were continually being reviewed to adapt to changing departmental working practices. At one site the ED underwent radical changes to electronic records, internal patient pathways, communication and referral methods over a prolonged period. The Redthread team repeatedly adapted their contact methods, changed internal publicity materials, training and other processes to accommodate this. The operational team meetings were key to managing these changes successfully and our evidence suggests that this work is essential in maintaining clinician referrals and therefore access to the service before young people are discharged. We heard from various sources of the importance of youth

workers liaison with Mental Health teams in ED. High levels of mental health problems amongst young people involved in violence is acknowledged in the Home Office Serious Violence Strategy. At the point of arrest, those at risk of criminal exploitation were found to have three times the rate of behaviour disorders and over twice the rate of mental health problems as other entrants into the criminal justice system[27]. It is likely that similar levels of need are present in ED cohorts but there is little reliable data on unmet need almost by definition. We heard through interviews that meeting the level of emotional support needs of young people, if not specifically mental health issues, was a challenge for all staff working in ED.

"we still have a crisis around the amount of young people who are exhibiting some kind of symptoms of, you know, really severe anxiety, paranoia, stress from, you know, what they've witness from a violence perspective and what they're living that don't hit the mark up to get [. . .] counselling" – Redthread Staff

We were told that at one site there had been a "slow start" in developing joint working, negotiating shared care and cooperation between YVIP and mental health teams and at another that some problems persisted. A shared understanding of respective working practices, responsibilities and remits between YVIP and mental health emergency staff sometimes appeared to be undeveloped. Work to address this should reflect the fact that criteria for both services cannot, even in principle, be clear cut and require negotiation and agreement to avoid young people failing to access the right support during a short window of opportunity or over burdening specialist services with inappropriate referrals.

Early on during this evaluation the YVIP in Nottingham piloted the creation of "Redthread Champions", a self-selected group of clinical nursing staff with an interest in the programme. The aim was to increase clinical engagement and provide more continuity of support for referrals when youth workers were not available. This initiative has been well received and been spread to all centres using medical and other staff groups in addition to ED nurses. Champions receive extra training and support to promote the YVIP and can advise clinical staff about adherence to the inclusion criteria. At another site a 'referrer of the month award' has been used to increase engagement and encourage referrals.

"I definitely feel that since the champion role has been piloted, we work more closely as we are being integrated into the service rather than it being an extension of our resources." – ED Clinician

Promoting such clinical engagement is a continuous process. We found evidence that in some places there were a limited number of regular referrers and suggesting inconsistent attitudes to the value or ease of referral by some. Reductions in referrals over time were reported in a YVIP evaluation[69] but this was accompanied by increasing specificity highlighting the need to monitor activity in some detail to avoid inappropriate referrals. The professional groups referring differed between sites with some places seeing more medical and some more nursing referrals. The youth workers consistently emphasised that referrals could be made by anyone with concerns for the young person and that they were happy to triage referrals as required.

We recommend that all NHS host sites agree mechanisms to maximise the numbers of young people who are offered the intervention. This should include allowing youth workers access to clinical systems to proactively screen for referrals under suitable contractual and governance arrangements. Mechanisms should be in place to ensure missed referrals, for example young people treated and discharged 'out of hours', can be contacted and offered support or be given self-referral information by clinical staff before leaving. Many of these processes are already in place and should be a basic standard of any future services in ED. Inconsistencies in coverage or access undermine efforts to sustain YVIPs as a "core" element of emergency care for young people.

69 Evaluation of Oasis Youth Support violence intervention at St Thomas' hospital in London, UK: Final report 2010-16 Y LLan-Clarke, L Kagan, J DeMarco & A Bufulco. 2016, Centre for Abuse and Trauma Studies, Middlesex, England.

Summary

Ongoing work is required to ensure that the YVIP work safely and effectively with non-ED clinical teams such as liaison mental health and safeguarding. We found that these relationships take time to develop. This should be recognised and prioritised at each new site. NHS clinical leads in particular have a role to play in ensuring early embedding of YVIP staff within all the various elements of the ED pathway.

Knowledge of the respective pathways and responsibilities of YVIP and liaison psychiatric services should be included in planning of future YVIP implementations. Greater training of YVIP staff with direct input from liaison psychiatric teams familiar with working in the ED environment could help to ensure that services are complementary, seamless and safe.

Redthread have developed a number of initiatives to support awareness and encourage referrals from all groups of ED staff. Each YVIP recruits and trains volunteer "clinical champions" amongst clinical staff. They increase the consistency and accuracy of referrals and help maximise out of hours access.

Demand for the service was often highly variable due in part to escalations in violence reflecting events in the community such as reprisals or gang conflict. We heard concerns that short-term increases in referrals could sometimes place strains on the capacity of YVIP services. This underlines the need to establish reliable estimates of need and capacity at each site and to negotiate adequate resource from all partners to meet it.

4.2.4 Building consensus about reaction and prevention

Relationships at a meso level are vital for successfully embedding YVIPs into new trusts. An important ingredient for success was the degree to which initially enthusiastic individual NHS staff could build a consensus within their own organisations to host a service. We heard that consensus was needed about the reactive and the preventative aims of the YVIP. Whilst there was widespread agreement that EDs had a duty of care with regard to dealing with the immediate needs of young people there was less agreement that ED could engage with prevention of future adversity-related injury.

"I think [Redthread youth workers] brought an element of patient care that we couldn't provide. We're brilliant at patching people up but we're very aware that often we end up as a revolving door and we're not addressing root cause of what's brought them in with this injury, whereas Redthread can do that and an A&E nurse can't."
– ED Clinician

Where prevention was acknowledged as a legitimate concern for the NHS it was often framed as the achievement of reductions in re-injury. Other agencies outside of acute health needed to demonstrate improvements in the conditions leading up to re-injury such as engagement in services and access to education.

We heard that individuals or small groups of staff worked hard to generate support within the complex management structures unique to each trust. It was evidently important for effective implementation that all departments along the patient pathway were aware and supportive but this was hard to achieve at least prior to launch.

With a reliance on individuals comes a risk to the continuity of leadership and effort needed to sustain initiatives such as the YVIP amongst the competing priorities in acute Trusts. We heard that successful sites had planned for 'succession' so that staff turnover did not reduce engagement between the YVIP and the Trust and maintaining it as a live issue with the host organisation.

Alongside support from leaders in key departments, successful sites had also managed to secure "executive sponsorship" to line-up support. Senior figures who got involved early on used their influence and authority to resolve blocks to implementation. Individual clinicians influenced 'downwards', building interest and engagement amongst front-line staff to ensure the success. This is consistent with research indicating that decentralised management structures are more effective than top-down instruction in supporting the adoption and spread of innovations[70].

70 Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O (2004). 'Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations'. Milbank Quarterly, vol 82, pp 581–629.

The NHS have a process to approve joint working with community enterprises setting out seven principles for engagement and partnership working[71] (box 16). This is more than simply creating a collection of policy and procedural documents (although this is important) but rather an expectation for engagement and working towards shared goals across sectors and organisations.

Box 16 NHS principles for partnership working

- Inclusivity
- Challenging inequality
- Demonstrating impact / building an evidence-base
- Co-production
- Transparency
- 'Critical friendship'
- Working towards shared goals

Our evaluation findings reflect the ways in which these principles have been put into action in creating YVIPs and our analysis of Redthread internal documents supports this assessment of their approach.

Those who were already convinced of the need for the YVIP were in the majority amongst those we interviewed. They agreed broadly that the emergency care system should:

- Recognise and accept that youth violence is a prevention problem for the NHS
- Understand that it has a unique role to play in identifying risk and delivering prevention work
- Embrace a broader definition and age range for safe-guarding work with relevant populations of young patients.

We heard that NHS staff had arrived at these views from their own clinical experiences in the main and perhaps not through research evidence or reference to policies although these could also play a part.

"[NHS ED Clinicians] said 'we're very aware that we're stitching up the same kids and they're coming back the following week, or the kid that comes in tomorrow is linked to another group rival to the kid we stitched up yesterday'" – Redthread Senior Team

"we're not addressing root cause of what's brought them in with this injury, whereas Redthread can do that and an A&E nurse can't" – ED Nursing Leadership

Pilot work within an NHS trust early on in the development of the YVIP in London highlighted that many young people seen after weapon-related injuries had a history of previous attendances after violence. This suggested that an ED-based YVIP could have a significant preventative role. Evidence from the existing academic literature, mainly from the US, supports targeting at high-risk individuals to maximise the impact of ED violence reduction interventions. Despite this we could find no UK evaluations which directly assessed the history of ED use or involvement in violence in young people accessing the YVIP and the intervention is open to anyone meeting the criteria.

As with the "gap" in ED provision to support the psychosocial needs of young people after adversity–related violence we heard from NHS staff that they were not seen, nor saw themselves, as addressing prevention.

"Your natural instinct is to say 'well they [NHS MTCs] react, don't they, they cure it', but what could they do from a prevention point of view?" – ED Clinician

A broader approach from the YVIP targeting all adversity-related injury is sometimes advocated by youth workers themselves.

"Basically the ideal would be to prevent the major traumas from happening so I think you've got to start with a minor one before it escalates into a major." – Redthread Staff

71 https://www.england.nhs.uk/wp-content/uploads/2018/11/09-pb-28-11-2018-third-progress-report-from-the-empowering-people-communities-taskforce.pdf#page=15

This conflicts to some extent with the need to target support towards more serious injury from a capacity perspective. The YVIP is largely focussed on weapon-related and serious injury but supporting young people experiencing a lower level of violence or "seriousness" would also fit the broad theory of change that Redthread promote. In fact we were told that at most sites there were capacity constraints which meant that the service could only respond to more serious injury. From our observations of the work of the service there remains some ambiguity about how these wider aims can be reconciled with the inclusion criteria applied by YVIP teams in practice. Given the lower levels of knife crime found outside of metropolitan areas, broadening the scope of the intervention could make it more attractive to smaller EDs with differing profiles of need.

We would recommend close monitoring of the focus and reach of the service in relation to the total population of young people attending each ED. This could identify potential barriers to access arising as a result of ethnicity, time of arrival, presenting circumstances or socio-economic disadvantage. The most useful definition of this population may be the anonymous data returned to the Police as part of the long-running ISTV initiative. The quality and consistency of ISTV data collection needs to be high at each site for this to be a standard approach to internal monitoring and evaluation. However, within this group a wide variety of severity of injury and contributory circumstances would be captured and the problem of how to target the intervention would need to be clearly addressed before defining how many young people who were eligible had been 'missed' by the service.

Those who remained to be convinced of the value of hospital-based YVIPs were in the minority. Even those who were more sceptical of the ability of EDs to host YVIPs were aware of the possible lack of immediate response to the needs of young people in the current system. Despite this, not all agreed that a prevention role was something that NHS could deliver well given current resources and training. Finally we heard that services such as the YVIP should remain external to the NHS as they were considered to be the responsibility of the criminal justice and social care systems.

"[redefining] knife crime is a health problem, and I disagreed with that [. . .] just to sort of politically shift the problem from one service to another without the proper discussion and resource, I think is someone abdicating their responsibilities" – Senior NHS Manager

The variety of views expressed to us is unsurprising (and unsurprisingly mirrored the roles, responsibilities and engagement with YVIPs of those we interviewed). Despite this we did not find evidence that views were entrenched to the exclusion of alternatives. Those who were sceptical were unsure of the level of demand or had concerns about the physical capacity of their departments or were not convinced by the evaluation data they had seen.

We did find a willingness to explore alternative models, to adopt some elements of the YVIP such as training for NHS staff, to create referral on to workers outside of the ED and many more. This suggests that a single model of YVIP may be difficult for all EDs to accommodate but that alternatives could be explored to spread elements of if not the complete intervention, more widely.

Summary

Violence Reduction Units will form a key component in the further spread of YVIPs into non-metropolitan NHS Emergency Departments. Their creation is an opportunity for dialogue between acute NHS providers' networks, new integrated care systems and existing local authority, voluntary and community organisations about needs and provision in each locality. This will complement existing public health representation on bodies dealing with community violence and wellbeing. VRUs could act as an umbrella body to curate expertise, synthesise local information, coordinate services and advocate for comprehensive "place-based" violence prevention to which YVIPs could contribute.

There is an emerging consensus that youth violence is a problem for NHS emergency and acute trauma services not just the criminal justice and local authority systems. The experiences of individual NHS clinicians and managers play an important part in spreading this perspective and our evidence suggests this is at least as strong an influence as research or policy initiatives. This risks support for YVIPs being confined to emergency services rather than being seen as an issue for the wider NHS to address.

4.3 Policy, evidential and regulatory landscape

Throughout our interviews participants expressed their views and experiences as conditioned by meso and micro level contextual factors governing what they felt they could achieve locally. It is beyond the scope of this evaluation to review this complex of professional standards, guidelines, statutory obligations, historical and legacy structures and funding and other considerations at work. The following sections are restricted to examining some of:

- The political and policy drivers for the spread of hospital-based YVIPs
- The available evidence from previous evaluations
- The academic research and studies of similar programmes
- The extent to which available evidence was deemed sufficient to justify continued spread

It is an essential feature of the challenge of introducing violence prevention work into a clinical environment such as ED that it requires consideration of so many normally distinct areas of knowledge, responsibility and professional practice.

4.3.1 Political and policy context

The Redthread YVIP was first launched at one site in the capital in 2006 and a second centre was opened in 2014. Compared to this recent expansion has been relatively rapid with all MTCs in the capital now hosting youth workers along with hospitals in the Midlands (not all current services are provided by Redthread itself).

This spread has been driven in part by widespread coverage in the media of increases in "knife crime" amongst young people, primarily in the capital. There has been considerable and sustained political pressure for action including the creation of an All-Party Parliamentary Group[72]. In turn there have been significant policy initiatives from the Home Office to address the "causes" of serious violence and to offer greater support to victims. Shocking evidence has also emerged of widespread and significant levels of exploitation of young people in contexts such as networks of sexual abuse and people trafficking. Finally, evidence of the spread of "county lines" drug supply networks beyond the capital and consequent spread of weapon-inflicted violence has highlighted increasing risks to young people even in smaller sometimes provincial cities. All of these factors have focussed attention on the question of the ability of EDs to offer sufficient support for young people in the context of headline-making violence. They also foreground the long established neutrality of physical care work in relation to the story behind each injury: we are not interested in how you got here our job is to treat you.

72 http://www.preventknifecrime.co.uk/

"[the] criminal exploitation piece and knife crime and violence, I think yes there was a recognition that that all needed to be seen under a safeguarding and vulnerability framework rather than just victims versus perpetrators, and recognising that the two were often one and the same" – Redthread Senior Management Team

A key task is to develop a case for YVIP within health services independently of media and political attention on knife crime which struggles to support the required neutrality. There is a need to avoid questions of providing support to 'criminals' which can sometimes be damaging to such initiatives. A further need for demonstrable impacts to justify investment arises when 'the circus moves on' and other priorities emerge. The initial political attractiveness of YVIPs needs always to be bolstered by stressing that it constitutes a new care pathway in its own right. We could find no national standards for the delivery of support services to young people after adversity-related injury in ED. Such expectations need to become the norm if fresh priorities are not to present themselves.

There was limited research or previous policy addressing the issue of how ED staff should identify and meet psychosocial needs. This fits with the traditional acceptance that EDs are reactive services and not responsible for prevention. Overall there was little NHS guidance to mandate the level of care offered by the YVIP over and above requiring social service referrals for those under 18. In practice this has meant building a case for re-funding YVIPs Trust by Trust using the collaborative relationships, experience and impacts created at early sites.

Spread of the YVIP requires adaptation to meet local priorities. Knife crime is only one of the multiple risks faced by young people. Redthread regularly made the point to us that they did not wish to be labelled as a 'knife crime' intervention. Above we discuss a specific example of Redthread working to understand local demand in a smaller ED in the Midlands. Redthread have established referral criteria which include domestic abuse and other sources of risk for young people. Redthread now collects and reports detailed data on this wider scope of work. Better analysis and presentation of this rich information is important to increase the appeal of the YVIP to potential NHS partners with differing population needs where weapons-related violence is less common.

We heard from NHS participants of the importance of meeting their existing organisational objectives but these did not include detailed commitments to prevention work or psychosocial aspects of care.

"there was a prevention agenda we had to fulfil as part of the NHS England Major Trauma spec and it was open to interpretation [. . .] There were no financial incentives for us. The prevention agenda was one tick in the box; the other one was actually to reduce our readmission rate for those patients" – NHS Trauma Centre Manager

The NHS has increasingly adopted a proactive attitude to prevention at a high level such as the NHS Long Term Plan but it is yet to be 'core business' in areas such as ED. Non-accidental injury prevention does not receive much attention: of eight uses of the word "violence" in the plan, seven refer to violence against NHS staff and one with regard to alcohol misuse. In major trauma services specifications the prevention aim was stated very broadly as a commitment.

"To reduce avoidable deaths and life limiting injuries through an injury prevention programme"[73].

There are then positive gains to be made by increasing local and national links between acute NHS services and public health where violence prevention features more frequently in policy literature. This was reflected in our interviews with public health practitioners and leaders. This macro contextual feature explains why public health and criminal justice responses to violence reduction have allowed Redthread to spread so far. The increasing importance of prevention for the NHS as a whole provides a useful context to introduce YVIPs into the emergency care pathway more widely and to begin to tackle the many threats and harms that young people face beyond weapons-related violence.

73 NHS Standard Contract For Major Trauma Services. Schedule 2 Service Specifications https://www.england.nhs.uk/wp-content/uploads/2014/04/d15-major-trauma-0414.pdf last accessed 17/01/2020

4.3.2 Existing evidence of what is needed and what works

As with political and media attention, much of the available evidence for the needs of young people in ED continues to focus on incidents of injuries involving weapons. Recent NHS data show that 17% of assaults with a sharp object involve people under 18[74]. An important governmental response has come in the form of the Serious Violence Strategy published in 2018[27]. This includes a number of initiatives seeking to develop a 'public health' approach to violence reduction and sets out direct challenges to health organisations to work with the police, local authority and criminal justice partner to delivered complementary services. The document makes the case for more youth violence interventions in ED and commits the government to

"support Redthread to expand and pilot its Youth Violence Intervention Programme outside London, starting with Nottingham and Birmingham, and to develop its service in major London hospitals" – Home Office [27 p9]

The Home Office strategy also makes clear that multi-agency working will include the health sector. In the context of responses to "county lines", frontline health workers are identified as "best placed to spot its potential victims"[27 p50]. YVIP initiatives in hospitals provide education, awareness raising and support to frontline staff who as discussed above, are unfamiliar with criminal exploitation and other forms of violence to which young people are exposed. The curriculum of safeguarding training in the NHS is constantly evolving but our interviewees in ED valued the accessibility of expertise provided by youth workers. A safeguarding practitioner highlighted the practical support given to young adults and the ability of youth workers to continue intervening beyond the hospital gates as two key features of the YVIP which the NHS could not provide. This work needs to expand to ensure that emergency health services can help implement the serious violence strategy as intended.

The Home Office strategy also describes a number of community initiatives into which ED-based youth violence interventions can refer as part of their local network of partners. Again the YVIPs will provide the link within EDs to ensure this happens. We were told of plans for YVIPs to refer into youth support services delivered in custody suits allowing continuity of support beyond ED. Many US interventions are targeted purely at those at high-risk of re-offending but Redthread do not currently provide support to those who are arrested so this would be a valuable extension of the service and likely to support the crime reduction impacts of the service.

Other signs of the acceptance of youth violence as a "public health" issue were found in the policy literature. The Youth Violence Commission recommends increasing the adoption of public health approaches to violence reduction in its interim report[75]. It calls for greater integration and collaboration across branches of government including health, public health and mental health services. Integration at government level is also mandated in the Serious Violence Strategy. An Inter-Ministerial group to monitor progress with implementation includes the Department of Health and Social Care. It is at this level and in these ways that the context is set for far further adoption of the YVIP model into urban EDs with significant levels of youth violence and exploitation. Public Health England has also called for a "whole system approach" and sets out the "five Cs" of what this entails across the public sector[76]. These include collaboration and "cooperation in data and intelligence sharing" and the establishment of a Serious Violence Prevention Network (p77). The document also highlights regional best practice including the provision of "technical support" on violence reduction to emergency services and their full engagement in violence reduction across geographical areas as seen in the "Cardiff Model". Although there was little specific mention of a direct role for emergency and acute hospital departments they provide important access to young people at risk and the YVIP approach demonstrates how they could intervene in support of these larger policy goals.

The high number of possible approaches could itself be a threat to the further expansion of YVIPs and many alternatives in current policy which could lead to diverting resources away from YVIPs in practice. The Serious Violence Strategy states for example that:

"Since 2012, the Government has been actively supporting and leading ISTV including funding a network of Violence Reduction Nurses to develop data collection and information sharing" (p73)

74 Allen G et al 2019 Briefing paper (SN4304): Knife crime in England and Wales, House of Commons Library, London.
75 The Youth Violence Commission – Interim report. 2018 http://yvcommission.com/interim-report/
76 A whole-system multi-agency approach to serious violence prevention: A resource for local system leaders in England. October 2019. Public Health England, GW-740, London.

We could find no reference to "violence reduction nurses" in our limited literature review and none of interviews and other data gathering revealed reference to these staff. We are unclear as to what resource continues to be devoted to this work by 2020 and whether this might displace investment in YVIPs. We did find that involvement in violence prevention within acute NHS hospitals varied even across sites which had implemented the YVIP. As we noted above, in practice the involvement of specific EDs in violence reduction was driven by the small number of motivated individual clinicians who had made violence prevention their chosen focus. Fortunate "timing" and serendipity had also played a great part. In general we found that policy, media focus and alignment across government functions provided a opportunity for YVIPs to develop but only as one possible response and local drive still appeared to be the reason why some areas implement them whilst other do not.

A further policy supportive of YVIPs is the likely establishment of a "duty" on all public sector professionals to report involvement in or vulnerability to violence[77]. The main aim would be to increase collaboration across various public services including health. The small number of responses to the consultation from health and social care organisations favoured working through "Community Safety Partnerships" on a statutory basis but some health professionals and organisations questioned whether preventing serious violence was "part of their role". There was support for the idea that clinical commissioning groups (CCGs) should "commission the right services" to reduce violence which echoes our data. Though "place-based" commissioning structures are being created, greater political will is required to increase the priority of violence reduction in acute health. In ED such as duty mandated at the macro level would require greater skills and resources from ED staff than is currently available. Early intervention and prevention initiatives such as the YVIP and the importance of multi-agency working are widely accepted the commonest reason for reluctance to accept such a duty remains the lack of resource to put it into action.

Summary

A common theme running through current violence reduction policy has been the "public health approach" but we found limited evidence that this development permeates deeply into the acute NHS at present. Without adequate health sector funding and acceptance that youth violence is a priority, these policy shifts alone are unlikely to drive national spread of the YVIPs within EDs.

4.3.3 Evaluations of YVIPs

The Redthread YVIP has undergone a number of evaluations and has been extensively 'piloted' in a variety of settings. Despite this the greenlight to mainstream the intervention remains elusive. There are considerable disagreements over the meaning and purposes of 'pilot' work which go some way to explaining why successful pilots alone do not guarantee uptake and spread[78]. If pilots do not include specific commitments to analysis of comparative outcomes they do not answer those who require experimental proof. If they are intended merely to demonstrate 'innovation' or even 'best practice' they too rely on others to follow but can't mandate that they do.

Our interviews with NHS staff who were contemplating implementation were instructive. Their needs for further information were complex and not likely to be answered by a single academic study however robust. But they were keen to understand how the intervention had worked elsewhere but also how it had been funded and whether there was existing momentum.

"what have other Trusts done? You know, what are the success stories, what do those look like? Have people started small and managed to build it up? What could we do within current resource; what does that look like? Who's a regional support who we could go to get some of the momentum behind that?"
– **Senior NHS Trust Leadership**

77 https://www.gov.uk/government/consultations/serious-violence-new-legal-duty-to-support-multi-agency-action
78 Ettelt, S., Mays, N. & Allen, P. The Multiple Purposes of Policy Piloting and Their Consequences: Three Examples from National Health and Social Care Policy in England. Journal of Social Policy 44, 319–337 (2015).

This highlights the opportunities to better use the qualitative sources to demonstrate some of the complexity and learning about what YVIPs can do within ED departments that is currently missing from evaluations which focus on narrow numerical comparisons. We have also heard from academics of the many difficulties in generating strong analyses given the lack of access to data that many have faced (see section 4.2.2 above).

The experiences of clinical NHS colleagues, case studies of existing services and local evaluation data were all seen as valuable sources of 'evidence' broadly defined. This partially explains why spread so far has often hinged on informal clinical and managerial networks within NHS emergency services and why promotion and lobbying remain so important for organisations such as Redthread.

Systems for generating and implementing evidence for drug and therapeutic interventions have been solidly established for many years. But previous findings about the use to which evidence is sometimes put to guide decisions about service improvement or complex interventions show that

"Some NHS organisations appeared to struggle to interpret the evidence in favour of service innovations and apply an appropriate standard of proof." – **The King's Fund** [66]

We found significant differences in the methods used in YVIP evaluations so far compared to the types of research that inform clinical care and which NHS leaders and senior clinicians are familiar with. Even within the main policy document advocating YVIPs the interventions with sufficient academic and economic backing to implement were not identified.

"The most robust studies (systematic reviews) show that preventative interventions for violence can work. Cost benefit analysis shows they also offer value for money and have benefits across a range of domains, including reduced crime but also better health, education and employment outcomes" – **Home Office Serious Violence Strategy** [27 p45]

The standards set for justifying progress in many areas of violence reduction are not being met currently and the accumulation of smaller studies does not appear to be meeting this need.

"The formal evaluations available for the [. . .] population based public health approaches to violence demonstrate how challenging it is to effectively evaluate public health, or system wide interventions." – **Public Health England**[93]

So what evidence is available to decision-makers? Our scoping literature search found two main sources of evidence

- Quantitative outcome studies in peer-reviewed academic journals mainly from the US
- In situ evaluation studies of UK YVIPs with unsuitable controls reporting limited follow-up and outcome measures

The academic literature on the various uses of evidence by policy-makers does not give much comfort that agreement over the evidence base for YVIPs will be easy to reach[79,80]. Despite this many of the studies we found did provide the sort of evidence that could be expected from pilot projects demonstrating feasibility and plausibility. This gives health leaders the confidence that the service can work and the opportunity to conduct their own service evaluations to provide assurance.

We found a relatively long-term evaluation of an ED-based YVIP reported referral, activity and other data over six years at Guy's And St Thomas' Hospital in London[69]. A third of potentially eligible young people engaged formally with the service there was considerable loss to follow-up, it was not possible to determine the effects of the service vs standard care without a control group and process and informal work was not reported in detail. A three year evaluation of the Redthread YVIP at St Mary's Hospital in London was conducted to measure the effect of participation in the service on young people[57]. Outcomes were measured using an un-validated risk assessment tool and re-attendance was compared to historical controls.

79 Weiss, C. H. The Many Meanings of Research Utilization. Public Administration Review 39, 426–431 (1979).
80 Oliver, K. A. & de Vocht, F. Defining 'evidence' in public health: a survey of policymakers' uses and preferences. Eur J Public Health 27, 112–117 (2017).

The Health Foundation | Redthread | NHS Nottingham University Hospitals NHS Trust

Only 1 in 5 young people receiving the intervention had follow-up data at 12 months of whom three quarters self-reported reduced risk of violence and exploitation. Re-attendance for violence dropped to 1 in 34 from 1 in 19 in un-matched historical controls. In line with our findings, NHS staff reported increased ability and confidence in dealing with sexual exploitation and violence amongst young people.

These evaluations do provide indirect evidence of other benefits. Figures for London YVIPs showed that of the 993 young people contacted by YVIP workers in 2018/19, 492 engaged and 52 (11%) of these were under 18s, previously unknown to services[81]. This supports the idea that ED interventions could be an important safety net. Our participants report that the 18-24 age group are poorly catered for currently and although 'looked after' children are entitled to support for slightly longer, vulnerable over 18s get little support.

Previous evaluations of the Redthread YVIP are largely unable to demonstrate the impact of YVIP on outcomes such as re-offending or re-injury but do show the intervention is feasible and supported by NHS staff. Future evaluations need to be fewer and larger with a strong quasi-experimental or other comparative design.

4.3.4 Research studies

The academic research evidence for violence reduction is difficult to generalise to UK YVIPs. Most published studies are North American, targeted at high risk groups, include extensive community psychosocial interventions and may be more intensive. We heard from participants that this remains a barrier to greater NHS adoption. Despite this, as with the evaluations above they provide considerable practical and theoretical information. These academic studies also show which outcomes are both important and measurable, how services might best be targeted, where potential savings might accrue and how in practice such services might best be configured in the UK context.

The most recent review of academic work is Strong et al[82]. The authors included six randomised trials of YVIPs as well as other studies. Most YVIPs reported improvements in violent injury "recidivism". A randomised trial by Cooper and colleagues was large enough to show a reduction in re-injury rate of 31% (5% vs 36%) compared to a control group and reduced arrest rates and convictions for both violent and non-violent crimes[83]. The programme was not directly comparable to the Redthread YVIP as it was targeted at over 18s with a history of violent injury and included family and group therapy, substance misuse treatment, intensive psychosocial input and home visits. Other comparative studies used weaker research designs or were too small to demonstrate effectiveness beyond chance. The review found many other positive impacts of interest to UK policy-makers including improvements in engagement with services, reductions in criminal justice-relevant outcomes and improvements in attitudes toward violence.

A Canadian ED YVIP demonstrates that waiting for definitive academic research is not always necessary where enough stakeholders agree on a course of action. Snider and colleagues developed and tested an ED-based violence intervention comparable to Redthread. The intervention was developed using a "knowledge translation process", co-designing components of their programme with community involvement to increase acceptability[84] prior to a pilot study[85] similar to those in the UK described in the previous section.

A randomised "feasibility" study was undertaken[86] with the purpose of justifying a definitive trial. The study compared data for active and control arms including the fidelity of the programme, recruitment rates, adherence and participant safety. They also used data linkage to report system outcomes including "incidence, number and severity of repeat violence related injury, justice and education systems interactions, substance misuse and mental health presentations, and ED length of stay".

81 Tackling Serious Violence in London –investment, delivery, innovation and future challenges. Samantha Cunningham, Director Criminal Justice & Commissioning, MOPAC June 2019.
82 Strong, B.L., Shipper, A.G., Downton, K.D. and Lane, W.G., 2016. The effects of health care–based violence intervention programs on injury recidivism and costs: A systematic review. Journal of trauma and acute care surgery, 81(5), pp.961-970.
83 Cooper C, Eslinger DM, Stolley PD. Hospital-based violence intervention programs work. J Trauma Inj Infect Crit Care. 2006;61:534–537.
84 Snider, C., Woodward, H., Mordoch, E., Chernomas, W., Mahmood, J., Wiebe, F., Cook, K., Jiang, D., Strome, T. and Logsetty, S., 2016. Development of an emergency department violence intervention program for youth: an integrated knowledge translation approach. Progress in community health partnerships: research, education, and action, 10(2), pp.285-291.
85 Snider, C., Jiang, D., Logsetty, S., Strome, T. and Klassen, T., 2015. Wraparound care for youth injured by violence: study protocol for a pilot randomised control trial. BMJ open, 5(5), p.e008088.
86 Snider, C.E., Jiang, D., Logsetty, S., Chernomas, W., Mordoch, E., Cochrane, C., Mahmood, J., Woodward, H. and Klassen, T.P., 2019. Feasibility and efficacy of a hospital-based violence intervention program on reducing repeat violent injury in youth: a randomized control trial. Canadian journal of emergency medicine, pp.1-8.

The study successfully showed that the YVIP could be delivered safely and that ED length of stay was actually reduced in the intervention arm. Results showed reductions in violence-related injury by 10.4% and 4.2% more young people were enrolled in education. Unfortunately those in the intervention groups who did not engage beyond recruitment were analysed as controls and when analysed as allocated ("intention to treat") differences in outcomes were no longer "statistically significant". Thus the trail failed to meet a stringent academic standard. How should such equivocal evidence be used in practice?

The study group argue that having seen the YVIP in practice, community and clinical staff "equipoise" was lost i.e. they decided it 'worked' to their local satisfaction and future funding was agreed without completing the 'definitive' study.

Summary

Many of the people we interviewed felt that better evidence was needed to justify investment in YVIPs in ED compared to other possible uses of scarce funding but there was little agreement about what and how much evidence would suffice. We are aware of a number of ongoing evaluations some due to complete in 2020/21 which should improve the evidence base for further spread. Whatever these studies show, they will help create the cross-organisational agreement needed for widespread adoption. Co-design, collaboration and joint investment are, alongside stronger research and evaluation, important preconditions for spread according to our participants.

International trials do show how better outcome data could be obtained and used. Collaborations across service boundaries are required to follow the young people using the service. This would allow linkage and effective anonymisation of administrative data and provide stronger evidence of effectiveness of current YVIPs. Such analyses are increasingly applied to "wicked" (complex, multi-factorial) problems[87, 88]. Public confidence in these approaches is growing given their power to demonstrate which choices for public spending actually "work".

4.4 The challenges of expansion and spread

This evaluation was conducted during a period of expansion of the Redthread YVIP into sites in the Midlands and at University College London Hospital. Our findings suggest that the work of implementing YVIPs has fallen mainly to Redthread and that further implementation represent little risk even in stretched NHS EDs.

"there wasn't [a] big impact to us at all. They did loads of the work [of setting up the service]" – NHS Senior Manager

As with promoting YVIPs, expansion itself places considerable pressure on Redthread who have sought funding dedicated to scaling-up. They have identified a need to expand their skills and capacity to manage further expansion.

"[we identified] a need to develop the organisation and to start to build some infrastructure, because otherwise we would have sort of collapsed quite quickly I think" – Redthread Senior Management Team Member

Redthread has identified human resources and finance as two key areas where their current capacity is a limiting factor. During the period of this evaluation many of these factors have been addressed and the charity continues to evolve. Despite these changes it is important for funders to recognise the needs of relatively small providers where expansion at 'scale and pace' is required. Funding should be ring-fenced to support central business functions as well as delivery.

"Well, I think one of the challenges I think for scaling up is how we develop the infrastructure of the organisation and how we grow that." – Redthread Senior Management Team

87 https://crisnetwork.co/uk-cris-programme
88 https://www.healthylondon.org/our-work/digital/london-health-care-information-exchange/

Redthread have entered a transitional phase from a small scale social innovation, albeit with a professionalised staff body and organisational structures, to an increasingly large provider organisation. Such changes can create internal pressures on social innovators as noted by van Wijk:

"[expansion] is creating pressures within the organisation itself. Scaling up can lead to weakened bonds and loss of a sense of shared endeavour"[37 p7].

In another study scaling up was found to carry a risk of weakened bonds and loss of a sense of shared endeavour in small organisations as

"the social and moral fabric of the organisation [begins] to fray, and mission drift [ensues]"[89 p895].

Redthread have a variety of internal structures and processes in place to ensure that the individual teams at each Trust are aligned with changes made centrally. During the course of this evaluation, we heard a number of examples of changes in the focus of the YVIP to meet local needs, work with existing services and meet the demands of funders for ever more quality assurance and monitoring. Despite this work, we heard from some NHS leaders that they sometimes lacked clarity about the detailed processes and objectives, difficulty in understanding some elements of the intervention and how this fitted with local needs. The adoption and dissemination of a detailed logic model or theory of change is an important way to help to clarify what is 'in and out of scope' for a complex intervention especially during phases of expansion.

We heard that sources of funding or expansion proposals sometimes came with very short deadlines or were for limited periods and required careful assessment of the risk as well as benefits for the organisation. Developing capacity needed for scale-up is a common and significant challenge for the core leadership of many community and voluntary sector providers. In a competitive landscape of potential providers, efforts to maintain continuity of staffing and retain experience and organisational learning come under pressure. We observed difficulties at other (non-Redthread) YVIPs in setting up and establishing effective teams to the tight timescales set by local funders. We have argued for the need for better support for project management and set-up within host NHS sites. Redthread have developed strong quality assurance mechanisms but these can appear costly by comparison to alternative providers.

To this extent at least, funders' and providers' interests are not always well-aligned. Short funding horizons, churn and multiple small and responsive providers create a competitive environment and perhaps unconsciously a disincentive for commissioning bodies to move beyond 'piloting' to longer-term widespread implementation. This is related to the continued calls for YVIPs to be "proven" in often not fully specified ways. Once again this problem is known to hamper innovation in the NHS.

"Adoption of most service innovation needs to be seen as part of service improvement rather than the process of 'rolling out' a 'proven' approach" – Ben Collins[66]

Expansion also results in a need to measure fidelity and increase funders' confidence that proposed outcomes are delivered. Instead, short term and precarious funding create a pressure to prioritise fund-raising activity at the expense of involvement in rigorous evaluation and reporting work diverts management resource from planning for spread and sustainability to agility and responsiveness in the short-term. We have seen evidence of the positive effects that VRUs are already having by providing guidance and to work with provider organisations to develop logic models, delivery plans and evaluations. This work will improve the chances that the ED YVIPs and the other young people's services into which they feed can be implemented with greater uniformity and efficiency.

The scaling up of social enterprises can be hampered by rigidity arising from the original context of the innovation and those who recognised its value at the outset[79]. Social innovation, by definition brings changes to existing institutionalised approaches to social problems. They do what they do precisely because others are not and sometimes scepticism about established services. Redthread were driven by the unmet needs of young people in ED. As the organisation has grown it has been important to develop clear referral criteria but we have heard that these require continual adjustment and case by case judgements.

89 Ometto, M. P., Gegenhuber, T., Winter, J., & Greenwood, R. (2019). From Balancing Missions to Mission Drift: The Role of the Institutional Context, Spaces, and Compartmentalization in the Scaling of Social Enterprises. Business & Society, 58(5), 1003–1046. https://doi.org/10.1177/0007650318758329

Scaling up and fidelity to a theory of change require formalisation of working practices and responsibilities. In the context of the spread of YVIPs within the NHS this requires reconciling the different perspectives of individual NHS trusts with the flexible, responsive characteristics of the original idea. Redthread continues to evolve to remain responsive whilst striving to deliver a consistent service across all of its varied sites.

Expansion of the charity has created opportunities for wider influence across the system and for the development of what is essentially a specialist branch of embedded youth work. A full review of core training was underway during the evaluation period under the guidance of an externally commissioned clinical psychologist.

"So we've now changed our core training modules to include youth work in the emergency department, trauma-informed daily practice, and we're writing that module with [external advisor]" – Redthread Senior Management Team

The period of growth was also a positive feature of working for Redthread for youth workers we spoke to. Many found the challenges of taking the intervention to new EDs inspiring and they took pride in their expertise and how this could augment the service provided to young people.

"What we are capable of doing is supporting young people to be safe. That's our expertise." – Redthread Staff

We heard from NHS and non-NHS interviewees with experience of Redthread that they had confidence in the service as a result of quality assurance mechanisms in place. We saw and heard that Redthread has a strong ethos of team working, effective communication, staff development and clinical supervision support. We were told of multiple opportunities offered to staff to maintain their motivation and the quality of their work.

"[Redthread are implementing] team leader development days and practice days so every couple of months we get the whole team [. . .] together [to spread] any improvements in processes, any good practice, any new learning" – Redthread Staff

This positive view was expressed at all levels of the organisation.

"the support network and the training opportunities and the progression and growth of you as an individual has been fantastic and I feel really like grateful to be a part of this organisation." – Redthread Staff

We found evidence that recent growth was not without its problems. Communication networks had become overstretched and less responsive due as much to the speed of expansion as to its scale. The need to provide close team leadership and coordination across sites that geographically dispersed was recognised by the senior team. In some cases staff turnover and changes to role definitions had also temporarily reduced the cohesion of what had been a small and well integrated organisation.

"it's all very well and good that the organisation's saying you can turn to anyone for help but unless you actually know them, you don't always feel comfortable doing that" – Redthread Staff

There was acknowledgment of these problems within the Redthread leadership team and plans were in place to address them. We also heard from experienced team members that the period of "bedding in" at new sites was anticipated and actively managed and that experience of this had grown within the organisation.

Summary

Despite considerable expansion during the period of this evaluation we observed cohesive team working within Redthread and in its working with host EDs. Internal restructuring of the Redthread Leadership team with increased resource for human resources and data management functions give reassurance that the organisation has addressed the pressures created by ongoing expansion and preserved the quality of its offer to young people.

4.4.1 Support for expansion

As we saw Redthread manage the pressures of expansion we tried to understand what contribution might come from NHS partners and funding organisations to support further spread. We saw many opportunities for NHS organisations to provide greater internal support for the set-up of the service. We were told of the difficulties Redthread found in working closely with the many individual departments within each NHS trust. In some cases this resulted in delays in meeting basic infrastructure requirements and led to conflicting demands from Information Governance, Human Resources and ICT departments. There was no pattern and some Trusts appeared able to support implementation smoothly and provide adequate project management support in many cases. Redthread have tried to develop a standard portfolio of agreements and policies based on previous implementations to ensure rapid deployment across multiple sites to meet NHS demand but many trusts continue to require unique local arrangements. This continues to slow down spread and the delivery of effective services early on.

Summary

The NHS could help to support more consistent and efficient expansion of YVIPs. This would help reduce the internal pressures of expansion on Redthread itself. Coordinated decisions to "mainstream" the YVIP across EDs are needed at a higher level within the NHS not just at the level of individual Trusts.

4.4.2 Fidelity to the theory of change

Many interviewees we contacted were keen to understand how the different components of the YVIP delivered benefits to young ED patients. As we have seen, Redthread have already been selected as a beacon to demonstrate good practice for hospital-based violence reduction work by the Home Office[27]. This endorsement is based on the assumption that implementing the programme will lead to the desired outcomes by maintaining fidelity to the original theory of change.

"whether it's the safe, healthy, happy bit or whether it's about criminal justice outcomes, reducing re-offending or contact with Police, or whatever, or community safety – health outcomes, people not coming back to A&E. Whatever it is, I think the logic model needs to be really clear" – Academic Criminal Justice Policy Advisor

Developing a framework to benchmark fidelity also serves an important secondary purpose in helping develop the evidence base. This has not always been done well during roll-outs of other complex interventions[90]. Once proposed causal mechanisms are established for a given intervention, measures of fidelity can be designed to underpin the casual link to outcomes[91,92]. Evaluation and research conclusions can be stated with greater confidence and likelihood of replicability[93]. This work is then fed through into business cases and economic evaluations to support wider adoption.

Redthread have used the idea of fidelity to measure compliance with key intervention components across different sites and over time to demonstrate consistent effectiveness.

"So if Redthread was a fast food franchise what would the Redthread burger look like and I think that's effectively what we're trying to work through" – Redthread Management Team

Fidelity assessment can also help to explain why and where programmes are less effective and foster organisational learning and are specific to each intervention. The fact that the Redthread YVIP has been funded for a number of years reduces the scope for research techniques such as randomisation which restrict access to an established service. At this stage of spread of YVIPs validated fidelity measures could provide another alternative source of evidence to justify investment by demonstrating that new sites are delivering the same level of service.

90 Moore, G.F., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., Moore, L., O'Cathain, A., Tinati, T., Wight, D. and Baird, J., 2015. Process evaluation of complex interventions: Medical Research Council guidance. bmj, 350, p.h1258.
91 Dusenbury, L., Brannigan, R., Falco, M. and Hansen, W.B., 2003. A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. Health education research, 18(2), pp.237-256.
92 Hasson, H., 2010. Systematic evaluation of implementation fidelity of complex interventions in health and social care. Implementation Science, 5(1), p.67.
93 Sundell, K., Beelmann, A., Hasson, H. and von Thiele Schwarz, U., 2016. Novel programs, international adoptions, or contextual adaptations? Meta-analytical results from German and Swedish intervention research. Journal of Clinical Child & Adolescent Psychology, 45(6), pp.784-796.

Despite these benefits for adoption and spread less than a third of evaluation reports were found to report fidelity measures adequately[94]. None of the Redthread evaluations we saw measured fidelity. The "TIDieR" Checklist has been proposed to improve intervention reporting in published literature and serves as a useful guide to how fidelity scales could be developed[95] and an example of its use to describe the YVIP is included as Appendix 6.

We recommend that Redthread seek academic support to formalise and validate their assessment of the fidelity to their theory of change and standards of delivery. One approach is to move from standardising the "form" of an intervention i.e. this process is followed by that process, to standardising core "functions", best thought of as causal steps leading desired outcomes[96]. This allows for variation in how the YVIP is delivered at each site whilst retaining causal continuity. In the Theory of Change (Appendix 1) what we are terming functional components are coloured yellow and referred to as "intermediate outcomes" and might include:

- Establishment of a trusting relationship with Youth Worker
- Increase young person's awareness of risk
- Increased self-awareness of the young person
- Gain commitment to lifestyle change
- Increase engagement with services
- Increase sense of agency and self-efficacy

The impact of components would remain open to question (if not supported by research) but evaluations of all complex interventions face similar challenges. The further advantage of this approach would be to make explicit that some functional components of the full intervention are delivered as part of the brief initial work with the many young people to demonstrate the value of this ad hoc work.

Summary

Complex interventions require fidelity in delivery of their core components. This ensures that the intended outcomes are reliably delivered during adoption and spread. Components should therefore be clearly articulated in a 'theory of change' or logic model using established frameworks such as TiDIER. This addition to trial evidence will increase confidence that the component functions reliably create desired outcomes.

We recommend that Redthread continue to develop a more detailed logic model co-designed with young people and NHS staff. This would set out the specific, interlocking components of the YVIP, how they work to help young people achieve change and would capture adaptations and developments in a form accessible for future partners.

Redthread should develop a comprehensive, validated fidelity assessment process potentially with the support of an academic partner. This could form a key part of reporting to funders and host sites to maintain engagement. This would go beyond the existing focus on numerical data and could include a structured description of:

- Operational collaborations, engagement and effective communication
- Feedback from service users and NHS staff
- The scope, content and effectiveness of youth worker and NHS staff training provided
- Audits of risk assessments, history-taking and onward referral processes
- Assessment of record keeping and information governance practices
- Reviews of adherence to standard operating procedures for joint working with mental health services, safeguarding teams and non-NHS services such as social services, police and youth offending teams

94 Ang, K., Hepgul, N., Gao, W. and Higginson, I.J., 2018. Strategies used in improving and assessing the level of reporting of implementation fidelity in randomised controlled trials of palliative care complex interventions: A systematic review. Palliative medicine, 32(2), pp.500-516.
95 Hoffmann Tammy C, Glasziou Paul P, Boutron Isabelle, Milne Ruairidh, Perera Rafael, Moher David et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. BMJ 2014; 348 :g1687
96 Hawe, P., Shiell, A. and Riley, T., 2004. Complex interventions: how "out of control" can a randomised controlled trial be?. Bmj, 328(7455), pp.1561-1563.

A fidelity assessment based on a functional approach would allow clearer bench-marking between sites and encourage learning and maintenance of best-practice whilst allowing for local circumstances and case-mix.

4.5 Sustainability

As new YVIP sites become firmly established the need to build a sustainable future has assumed more urgency for Redthread given previous episodic funding but new demands for expansion. The current evaluation and research evidence base for hospital-delivered violence prevention shows they are feasible and is broadly indicative of potential impacts on some important outcomes for young people.

Recent policy support for greater multi-agency working to include acute health, social care, criminal justice and public health organisations and the creation of VRUs both offer renewed opportunities to link and use existing data and reach agreements over what 'counts' when placing future investment.

4.5.1 Demonstrating activity and impact

There are multiple possible audiences for local evaluation reporting from internal service review and monitoring, to large scale research projects aimed at creating definitive evidence.

"It would be good to share that with the team to say actually, since Redthread's been here, we've reduced re-offending knife crime by this percentage" – Senior NHS Clinical Leader

Redthread create and disseminate a wide range of communications which include activity measures designed for funders and partner organisations including formal reports, newsletters and presentations. We saw considerable evidence of detailed activity breakdowns being fed back to funders in line with funding agreements. We learnt that this data is important to funders for monitoring their investment in the YVIP and at individual sites to monitor and respond to changes in levels of engagement, team capacity and uptake.

The level of detail within the data available from Redthread has improved during the period of this evaluation. Funders and NHS partners can now see data on the types of problems that young people face, the needs they express and more detailed breakdowns of specific actions taken. This allows greater understanding of the length and intensity of interventions at the level of the individual. Although this places a burden on Redthread during development of these reporting systems thereafter such reports could become a routine part of feedback to partners.

As discussed above, an important recent addition has been work to capture and analyse 'ad hoc' youth worker activity anonymously. Redthread now record such activity directly within NHS patient records at most sites. This improves communication with clinical teams and creates an audit trail. The resulting data are available to help Redthread understand where team resources are focussed. We heard that further integration of this information would be useful to funders and evaluators to better quantify and assess the impact of such work. This level of detail about processes of care is largely missing from previous academic and evaluation work.

"Because I think look at the engagement stuff, so how many young people are eligible, how many have engaged, how many turned down, how many said yes, how many then subsequent points of contact there were – those kind of activities in logic model, really useful, so you can say 'we've delivered x many services' – that's so important". – Senior Criminal Justice Policy Researcher

The Health Foundation promotes the use of routine and administrative data to improve health services[97]. Its own research has suggested that much of the NHS fails to effectively use the data it already has to drive improvement[98]. We found a wide variety of views on how to interpret and use activity data successfully to understand and support YVIP similar to the differences in importance attributed to research evidence amongst stakeholders. The rich data available at a local level could be better used to show how young people's needs were being identified and met. All complex interventions risk defunding if the challenges of demonstrating impacts are ducked.

97 For example https://www.health.org.uk/newsletter-feature/enabling-improvement-through-innovative-use-data

98 Bardsley, M., Steventon, A. and Fothergill, G., 2019. Untapped potential: Investing in health and care data analytics. London: Health Foundation.

"Additionally, unlike the Cincinnati CIRV, without a close partnership with researchers capable of carrying out a rigorous evaluation of the Glasgow CIRV, as well as support of the unit with data analysis, an independent evaluation was not obtained. Having a more structured evaluation and data collection plan from the start could have not only helped with implementation, but also could have strengthened the case for further funding to expand the Glasgow CIRV to other parts of the city"[99]

We heard that better analysis was informing YVIP workforce planning and deployment decisions and helping to ensure that services were equitable, accessible and adequately met demand. These data processes remain in development and suitable reports were not available during the evaluation period. We were able to review a number of previous reports compiled by Redthread for external partners. These typically included

- A narrative review of the reporting period discussing recruitment through-put and any mitigation or response to changes or pressures
- Numbers and proportions of the eligible, contacted and fully engaged target populations are reported by site, age, gender and ethnicity
- Key data regarding the reasons for presentations and youth worker activity such as completed risk assessments and type of risks identified
- Data on external service engagement (e.g. return to education) and need are also reported
- Intervention intensity (number of contacts, duration, referrals and signposting)
- Changes in detailed self-reported risk from baseline to follow-up
- Training to various partner organisations

Current reports did not routinely present data as time-series. Such graphical approaches could be used to illustrate changes in demand, referral and activity and create better understanding of trends and the effects of innovations in service delivery. Referral rates at each site should have a consistently recorded denominator, ideally the number of young people assaulted as recorded in ISTV data. This would allow better understanding of the relative accessibility and uptake of the service and allow targeting of groups who are currently less likely to engage.

As with previous evaluation literature we reviewed, data reporting often lacked the context of a suitable comparison group to demonstrate the impacts of introducing the YVIP compared to "treatment as usual". There are no information governance barriers to using routine data to understand how a service is delivered and where improvements are needed. Internally, data could be used from a pre-implementation period or from those who do not currently engage with the service or by comparing re-attendance using aggregated data from similar sites without a YVIP. We heard that previous evaluations of YVIP had foundered on data protection concerns and lack of academic expertise but better understanding of differences between groups accessing or not accessing the service would be valuable even without sophisticated statistical adjustment. Those we spoke to in leadership roles were often clear about their need for robust measures of "impact" but there was less evidence that partners were engaging in the joint working to share data confidentially and legally that is required to impacts even for internal audiences.

During the evaluation we were told that ED sites were measuring reductions in re-injury outcomes but at the time of writing these data remain unavailable. The failure to conduct and then publish local evaluations reduces the evidence available for new sites wishing to implement a YVIP in their department.

The Redthread leadership team are fully aware of the need to demonstrate impact and have commissioned recent work to develop a range of quantifiable outcome measures and a framework for evaluating them[100]. The proposed metrics strike a balance between the need for "external credibility" by drawing on "established measures" whilst reflecting the "programme variance" needed to adapt to new settings and to create a coherent analytical framework at an "organisational level". Outcomes such as re-engagement with services, reduction in involvement in crime and psychological measures of wellbeing such as the Warwick-Edinburgh Mental Wellbeing scale (WEMWS) are also proposed in the report.

99 Graham, W. (2016). Glasgow's community initiative to reduce violence: an example of international criminal justice policy transfer between the US and UK. Translational Criminology, Fall 2016, 14-16.
100 Redthread Outcomes Framework. May 2019 Impact Box. Commissioned internal development report (developed by https://www.impactbox.co.uk/)

This is widely used in mental health contexts[101] and has been used in "clinical settings within the NHS where patients are treated for both mental and physical illness"[102]. Such metrics are easy to collect confidentially via SMS or online and with little burden on young people themselves. They can allow comparison from baseline to follow-up showing the benefits derived from the YVIP. Anonymous data collection even from young people who do not consent to full support could also help understand lack of engagement without being intrusive.

We recommend that the proposed evaluation framework be implemented and efforts made to collect more limited data from a larger proportion of YVIP service users including those who do not engage to understand why. This work was continuing as we completed this evaluation. More detailed research would require greater resources and academic support than currently available.

"you need to do a prospective cohort study with these individuals to find out which directions they go in, and what's been effective. I think it would be unrealistic to expect Redthread to be able to do anything on that scale" – Public Health Leader

The need to include broader, non-physical health and social outcomes in evaluations was echoed in the views of many NHS clinical staff and other professional groups.

"A lot of the outcomes aren't health related [. . .] they're not going to be sick, they're not sick in the first place, they've got minor injuries, but if they engage with education, employment, training, family, stay at home, if there's a lifestyle change, OK, that's the outcome" – Senior NHS Clinical Leader

Many of the people we talked to wanted much wider evidence of impacts across criminal justice, employment and education including:

- Re-offending (arrest or conviction) rates
- Return to employment or education
- Access to adequate housing
- Reductions in gang involvement
- Reduction in weapon carrying or involvement in violence

From a broad acute health/public health perspective we also heard that key impacts should include:

- The proportion of a clearly defined population at risk who accept the service and receive defined components of support (intermediate outcomes)
- Changes in levels of risk, wellbeing, mental health status, lifestyle risk etc from baseline and over time
- Engagement and re-engagement with services at follow-up (safeguarding, mental health services and domestic abuse and violence, housing, social services, substance abuse services)
- Adversity-related injury re-attendance rates

There is admittedly great difficulty in measuring many of these long term impacts and significant resource and academic support was not available at the host sites we accessed. In the evaluations we have seen, fully consented individual data access was the approach chosen[103] with a high loss to follow-up likely to cause biased estimates of effects. Groups who do, or do not, agree to the YVIP intervention are likely to differ in important ways as do those who are or are not, available to follow-up. Statistical attempts to remedy flaws in observational designs are known to have limited validity when compared to randomised allocation[104]. This was a problem for some of those we interviewed.

101 The Warwick- Edinburgh Mental Wellbeing Scale: 7 and 14 item versions https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/about/ last accessed 29/11/2019
102 https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/about/use last accessed 29/11/2019
103 Roberts S. Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence: Literature review. 2019. Prepared by Public Health England West Midlands, published by Public Health England, London. http://westmidlands-vru.org/wp-content/uploads/2019/10/Youth-violence-interventions-evidence-review-2019.pdf last accessed 17/01/2020
104 Baron, Jon. 2012b. Which Comparison-Group ("Quasi-Experimental") Study Designs Are Most Likely to Produce Valid Estimates of a Program's Impact?: A Brief Overview and Sample Review Form. Washington, DC: Coalition for Evidence-Based Policy. http://coalition4evidence.org/wp-content/uploads/2014/01/Validity-of-comparison-group-designs-updated-January-2014.pdf

"[evaluators] count the number of times something's happened, they ask people if they like it, and then they don't really do anything else. So they don't actually look at does this make any difference fundamentally"
– Academic and Criminal Justice Policy Advisor

But as we have noted above many of the decision-makers we consulted valued non-academic information.

"I don't see why you wouldn't think it was great. [The Redthread YVIP] showed positive results [. . .] so why would we not try and replicate what they were doing?" – Senior Clinical NHS Leader

Some NHS staff were happy to regard evidence regarding non-health outcomes as important in their decision to support YVIPs.

"they've got minor injuries, but if they engage with education, employment, training, family, stay at home, if there's a lifestyle change, OK, that's the outcome" – Senior Clinical NHS Leader

Again Ben Collins' report for the King's Fund into NHS innovation found this to be a widespread and longstanding problem for the NHS.

"some NHS organisations were looking for a very different standard of proof before deciding to adopt service innovations, for example, evidence comparable to that provided in clinical trials of a new drug. Opponents of innovations might discredit them by reference to an unattainable standard of proof. Meanwhile, sensible, small-scale changes may be held up for lack of compelling evidence that they would deliver cost savings" [66 p22]

Robust measurement of complex interventions is difficult but there is agreement on what can be done to increase the robustness and usefulness, of research[105]. A key point is to ensure that the YVIP is tested "fairly" on outcomes on which it might reasonably be expected to have an impact. This would include the short-term recording of re-engagement with mental health services rather than longer-term improvements in mental health outcomes. These process measures are both more easily measured and more likely to show improvement given the short duration of the intervention and reliance on onward referral.

Future coordinated expansion of the YVIP to new sites should include planning, resources and academic support for suitable research trials using a "stepped-wedge" design[106,107]. There are few regulatory barriers to data sharing where it is justified for patient benefit, meets legal standards and has Health Research Ethics approval but again only academic support could enable this approach in practice. Secure anonymised data linkage across government services such as the police (e.g. Police National Computer) and the NHS (e.g. HES Online) have been conducted[108,109]. As public understanding of such research grows so too does approval[110].

"it's possible to do [data linkage studies], as long as you've got a good rationale as to why you're doing it. So the key thing is the rationale of so what's the public benefit, what's the patient benefit, what's the community safety benefit" – Academic and Criminal Justice Policy Advisor

This approach could be used to demonstrate that YVIPs in hospital via enabling greater engagement with services, improve outcomes such as arrests, weapon-carrying or convictions and reduce hospital injury re-attendance or improvements in mental health. The Home Office has created a Multi-agency Integrated Services Analytics Hub based within Avon and Somerset Police to develop a model for the "controlled collation" of data across the various sectors with a responsibility for dealing with the consequences of youth crime[27]. We could not find any publications from this source at the time of writing.

105 Faes, M.C., Reelick, M.F., Esselink, R.A. and Rikkert, M.G.O., 2010. Developing and evaluating complex healthcare interventions in geriatrics: the use of the medical research council framework exemplified on a complex fall prevention intervention. Journal of the American Geriatrics Society, 58(11), pp.2212-2221.
106 Brown, C.A. and Lilford, R.J., 2006. The stepped wedge trial design: a systematic review. BMC medical research methodology, 6(1), p.54.
107 Hemming, K., Haines, T.P., Chilton, P.J., Girling, A.J. and Lilford, R.J., 2015. The stepped wedge cluster randomised trial: rationale, design, analysis, and reporting. Bmj, 350, p.h391.
108 MacManus, D., Dean, K., Jones, M., Rona, R.J., Greenberg, N., Hull, L., Fahy, T., Wessely, S. and Fear, N.T., 2013. Violent offending by UK military personnel deployed to Iraq and Afghanistan: a data linkage cohort study. The Lancet, 381(9870), pp.907-917.
109 Rodgers, S.E., Bailey, R., Johnson, R., Poortinga, W., Smith, R., Berridge, D., Anderson, P., Phillips, C., Lannon, S., Jones, N. and Dunstan, F.D., 2018. Health impact, and economic value, of meeting housing quality standards: a retrospective longitudinal data linkage study. Public Health Research, 6(8).
110 Aitken, M., Jorre, J.D.S., Pagliari, C., Jepson, R. and Cunningham-Burley, S., 2016. Public responses to the sharing and linkage of health data for research purposes: a systematic review and thematic synthesis of qualitative studies. BMC medical ethics, 17(1), p.73.

All of these research and evaluation designs offer solutions to the problem of creating sufficiently strong conventional evidence to justify future investment. Other improvements in the evaluation of YVIP services would be easier to achieve and at lower cost using natural experiments or the inclusion of more rigorous controls groups for comparison to standard care given that many EDs still lack youth violence services.

Summary

Redthread should continue to develop data collection and reporting mechanisms to capture the resource devoted to supporting young people, especially those who do not go on to consent to a full programme of work. This will help demonstrate the full range and value of the service. Evaluation data should be collected in a way that minimises the burden on frontline staff, serves the need to capture activity accurately and does not require the transfer of identifiable data outside of the NHS.

Formal research comparing intervention outcomes to suitable control groups or sites should be incorporated into future expansion plans. Academic support and sufficient resources could deliver a robust study of sufficient scale. This would require commitment to experimentation at the outset. We remain unclear that all stakeholders actually require this level of academic evidence to justify continued investment.

Operational groups at the sites we observed undertook regular monitoring of the service in terms of clinical referrals but should define and understand the target population tightly. This would enable greater understanding of any barriers to access or uptake for specific groups defined by ethnicity, offending history or socio-economic disadvantage.

During the evaluation the availability and use of data improved in many of the YVIP sites. Data collection and analytical activities should include:

- Baseline data for each site on the eligible population – consistent collection and analysis of "assault" data (ISTV) including demographics, ethnicity and relative socio-economic deprivation should be made easy for frontline staff
- Use of the service – the proportions of young people referred by clinical staff, proactively identified by youth workers, contacted and consented as a proportion of those eligible for the service should be monitored longitudinally so that changes in capacity or demand can be addressed
- What YVIP aggregated assessments of risk reveal about changes in the experiences of young people over time in each locality – this could include sources of risk including involvement in crime, weapon use, sexual exploitation, social media use and adverse childhood experiences – this would provide valuable information for stakeholders such as public health bodies and VRUs
- Who accepts help and who does not – such information could be reviewed with partners to increase uptake and ensure that vulnerable young people are supported by other parts of the community network of services after leaving ED
- What onward referrals are made by youth workers – Initiation of referrals to mental health, domestic violence, drug and alcohol services
- What training is delivered to NHS – how often, what and to whom including monitoring of awareness and other outcomes of training
- NHS staff engagement – this could be monitored using surveys (normalisation process theory and other questionnaire instruments), referral activity and informal feedback
- Identifying barriers to access – socio-demographic, geographical and ethnic compositions should be monitored closely and reviewed with local partners to target efforts to increase uptake
- Service impact evaluations should be undertaken at each site to answer local information needs – where possible a suitable methodology should be used to compare re-injury between those using and not using the service
- Anonymous follow-up of young people who access and don't access the service should be developed e.g. via text message alongside existing formal follow-up at six months

Where applicable, the above information should be reported as proportions of the eligible population and as monthly time series or run charts to help identify trends in activity and to better target improvement efforts.

ED serves a unique population many of whom do not regularly access local authority, primary or secondary care services. We heard that whether young people are unknown to or disengaged from services is an important factor for stakeholders including mental health services. Currently it is unclear if engagement with the YVIP does reliably lead to accessing longer-term and more specialised support.

4.5.2 Demonstrating Cost and benefit

Reducing violent crime is clearly both an intrinsic good and makes economic sense.

"One incident of violence with injury is estimated to have an economic and social cost of £13,900" – Home Office Serious Violence Strategy[27]

The evidence we have gathered and analysed for this report features funding as a central theme throughout. Despite this 'cost-benefit'-based reasoning was discussed in a wide variety of ways and again evidence appeared limited. We have tried to understand more about the various perspectives of our interviewees, how these might make collaborative and consistent funding possible and how this could support wider implementation of the YVIP.

It is estimated that "violence with injury" and homicide are respectively 16 and 3699 times as costly as theft of a vehicle[111]. The average health-related cost of an "act of violence resulting in injury" is estimated at £920 including ambulance and hospital care costs but costs falling on other services and wider society include "defensive expenditure" (alarms, insurance), lost productivity, physical and emotional costs, police costs, criminal justice system costs totally a further £13 140.

For health systems the key outcomes of YVIPs are reductions in violent injury "recidivism" (re-injury), severity of injury, length of hospital stay and morbidity (long term physical and mental health consequences) from violent injury. Other un-costed gains include the improvements in the quality and effectiveness of ED care for young people mentioned by our participants. Community priorities were largely defined by existing commissioning arrangements and evidence of impacts at that level.

"Public Health is about evaluation and making sure that what we invest in is delivering the results that are commissioned against" – Local Authority Senior Leader

A recent systematic review found that 'academic' research evidence formed only a small part of decision-making policy-makers[112]. Funders and decision-makers were reported to also consider "financial sustainability, local competition, strategic fit, pressure from stakeholders and public opinion" and the importance of these considerations is highlighted in other sections of this report. The review reported that creating and disseminating "evidence on the costs of action or inaction" was probably of greatest use to policy-makers in practice. We heard of the problem of long-term resource constraints from all of the public sector and community provider staff we spoke to. The option of funding the service was set against other spending priorities.

"So in our hearts we're very keen to support this. In practical terms going and finding any bid to where this is going to become top of the list, as opposed to a cancer treatment or, you know, all the other things, it's probably not going to get funding" – Senior Acute NHS Leadership

Better evidence of the relative expense of YVIPs framed in the language of "action" vs "inaction" would be widely welcomed. Again macro level policy statements about effectiveness and cost-effectiveness are broadly supportive but non-specific.

"The most robust studies (systematic reviews) show that preventative interventions for violence can work. Cost benefit analysis shows they also offer value for money and have benefits across a range of domains, including reduced crime but also better health, education and employment outcomes". – Home Office Serious Violence Strategy[27 p45]

111 Heeks M, Reed S, Tafsiri M and Prince S. 2018 The economic and social costs of crime: Second Edition. Home Office, London.
112 Orton, L., Lloyd-Williams, F., Taylor-Robinson, D., O'Flaherty, M. & Capewell, S. The Use of Research Evidence in Public Health Decision Making Processes: Systematic Review. PLOS ONE 6, e21704 (2011).

Despite the relatively low contribution of health to the costs of crime above there is awareness of the burden of repeated violent injury amongst emergency services staff.

"When we looked at that data, every single person who'd come through major trauma as a victim of knife crime, had been in the emergency department several times before. So that was the start of us investigating then if there were any interventions that were going on in the country that we weren't aware of that could help break that cycle" – **Senior Major Trauma Management Lead**

Despite this NHS incentives to reduce injury are negative given cost for service and per capita funding models. This argues strongly in favour of the scope for closer collaboration on both future evaluations and the development of detailed of cost and benefit patterning to guide joined-up investment reflectively where costs actually fall. The cost-benefit of prevention involving emergency services is often extremely high compared to less targeted interventions. The long-standing ISTV programme has demonstrated a large societal benefit cost ratio of £82 for every £1 spent[113].

Strong cost-benefit evidence is available from the US. In one study (discussed above[83]) showing significant reductions in re-injury estimated healthcare savings were over $500 000 and criminal justice savings roughly three times this amount making the intervention overwhelmingly cost-effective ("dominant") compared to standard care. Generalisation to YVIPs in the UK is difficult as the US interventions tend to be tightly targeted at gang members and include

"intense and culturally sensitive one-on-one case management, including mental health services, employment opportunities, and guidance to other resources based on initial risk assessment (including education resources, court advocacy, housing opportunities, and tattoo removal)" [116 p253]

A US simulation study estimated healthcare cost savings alone of between $83k and $4m over 5 years for violent injury reductions of between 20% and 30% at a single hospital[114] and another based on a "typical" gunshot injury scenario reported a cost per QALY of $2941[115] well below the NICE threshold of £20-30k. Another US study found savings based on a yearly re-injury rate reduction of only 2.3% for those undergoing a VIP compared to no VIP[116].

The study estimated that implementing the programme was both cheaper and more effective and, when scaled up to include 100 individuals would generate 24 additional QALYs and over $4000 in health savings. In each of these studies combining criminal justice and health savings better reflects the likely impact of YVIP from a societal perspective.

Some indicative cost information from UK YVIPs is contained in the evaluations mentioned above. The St Mary's YVIP cost just over £200k in 2017 giving an estimated per patient cost of £559[57]. Excluding unrecorded ad hoc work as discussed above overestimates the per person cost. An informal estimate of possible benefits from reduced re-injury produced by Redthread itself put the societal cost of a "serious" assault at £34 739[117]. Preventing six such incidents would pay for the intervention for a year.

A recent cost benefit analysis commissioned by Redthread and funded by The Health Foundation uses data from previous evaluations and research, and estimates a 7% absolute reduction in assault injury re-attendance[118]. Assuming that around half of the eligible young people engage with the service there would be 14 fewer re-attendances for adversity-related injury per typical ED per year. The total societal benefit was estimated at just over £1m per site giving a saving of £4.90 per £1 spent (2018/19 cost basis). The direct saving for health services was £60 638 with the balance of savings to society overall estimated at around £1.2m.

113 Florence, C., Shepherd, J., Brennan, I. and Simon, T.R., 2014. An economic evaluation of anonymised information sharing in a partnership between health services, police and local government for preventing violence-related injury. Injury Prevention, 20(2), pp.108-114.
114 Purtle J, Rich LJ, Bloom SL, Rich JA, Corbin TJ. Cost-benefit analysis simulation of a hospital-based violence intervention program. Am J Prev Med. 2015;48:162–169
115 Chong, V.E., Smith, R., Garcia, A., Lee, W.S., Ashley, L., Marks, A., Liu, T.H. and Victorino, G.P., 2015. Hospital-centered violence intervention programs: a cost-effectiveness analysis. The American Journal of Surgery, 209(4), pp.597-603.
116 Juillard, C., Smith, R., Anaya, N., Garcia, A., Kahn, J.G. and Dicker, R.A., 2015. Saving lives and saving money: hospital-based violence intervention is cost-effective. Journal of trauma and acute care surgery, 78(2), pp.252-258.
117 www.neweconomymanchester.com/our-work/research-evaluation-cost-benefit-analysis/cost-benefit-analysis/unit-cost-database
118 Paul Riley 2020 Redthread's Youth Violence Intervention Programme: A Cost Benefit Analysis and case for scaling across hospital Emergency Department locations. Outcomes UK (Funded by The Health Foundation; unpublished)

Summary

Many participants we interviewed expressed the need for robust cost-benefit analyses and "return on investment" to justify funding YVIPs. Cost should be reported from NHS, criminal justice system, local authority and societal perspectives. A cost consequence analysis setting out all relevant costs is often most useful to funders especially where large scale health economics analyses are not available. A reliance on narrowly framed economic analyses just including health savings can choke off innovation and might not incentivise local NHS partners who cannot release savings.

4.5.3 Collaborative funding and "gain sharing"

The attitude of NHS health services towards the need for interventions for young people injured as a result of violence is only one determinant of the likely future spread of YVIPs but is clearly an important enabler. We found a variety of evidence indicating a lack of acute health engagement with violence reduction initiatives in the past. We also found little NHS policy or other macro level support to encourage health funding for YVIPs as a priority.

Stronger arguments might be made for capacity releasing interventions in ED but there are many calls on resources for unscheduled care prevention. These include drug and alcohol misuse, community mental health and social prescribing interventions.

In the absence of national ED targets or other incentives widespread adoption of the YVIP will require increased inter-agency working area by area. We heard from many participants that engagement was improving and collaborative working was increasing but this finding, based on interviews with those already committed to the provision of YVIP in many cases, may not be representative. Much was made of the possible impact of new health "place-based" systems to support cross-boundary working. We interviewed and observed meetings of VRU staff with a strong remit for collaborative working especially with health services but these structural changes remain untested. Our interviews suggest that the current spread of YVIPs, especially out of the capital, still owes much to the efforts of individuals in key positions in both provider and funding organisations.

Continuity of funding is imperative to maintain the quality and consistency of YVIPs. As we described above, the need to re-fund established interventions over relatively short cycles creates internal pressures and sometimes the loss of skills and experience. These threats could reduce the resilience and effectiveness of services and provides another reason to monitor impacts closely to highlight the risks of returning to "inaction" if services close. The necessary redirection of resources to fund-raising and away from core developmental and delivery activities has been mentioned as a problem for Redthread. The existing availability of YVIP within the NHS so far rests on time-limited funding whilst community services of importance to young people are over stretched. At the same time performance targets in acute health carrying financial penalties are regularly missed and calls on spending are intense.

"I am asked for five pounds for services for every pound I have to spend" – NHS Acute Provider Senior Leader

We heard little to suggest that many NHS trusts will directly fund YVIPs in the foreseeable future given current financial priorities.

"Although in London, the Mayor's Office and Policing in Crime, as a Police Crime Commissioner, has funded us and it's not been easy to get the CCGs and Public Health funders." – Redthread Senior Management Team

Redthread have always recognised the need to secure funding stability but cross-boundary funding remains the exception. Local authority funding is under unprecedented pressure with central government support reduced by over 50% in real terms in recent years and increasing regional disparities[119].

119 Gray, M. and Barford, A., 2018. The depths of the cuts: the uneven geography of local government austerity. Cambridge Journal of Regions, Economy and Society, 11(3), pp.541-563.

A further risk for voluntary and community sector groups is that cuts have been disproportionately passed on them according to a report in 2012[120]. This estimated that public bodies seeing cuts of around 4-8% had made cuts in funding to the third sector of around 40%.

Widespread and sustained adoption of YVIPs within emergency care depends on a transition from responsive, short term and localised funding towards the emergence of a sustainable NHS service. Could this transition occur in practice? Other innovative services have been seed-funded with the aim of providing and evidence base and driving a national implementation. The British Heart Foundation (BHF) co-funded the development of a community heart failure nursing service to improve the quality of care and reduce high unplanned re-admission rates. NHS data showed Heart Failure admission rates dropped by 35% saving £1826 per patient or £17m if rolled out nationally[121]. The BHF called for all NHS trusts to fund specialist nurses[122] but by 2019 there was still wide variation in availability, capacity and gatekeeping criteria of such services despite increasing demand[123]. Strong evaluation evidence is the starting point for mainstreaming of innovative services in the NHS but is only the beginning.

Summary

The patterns of potential gains from violence prevention are complex but measurable. Well-designed cost-benefit and outcome evaluations should focus on outcomes across service boundaries using data sharing approaches to demonstrate system impacts. These could help overcome well known difficulties of creating joint funding arrangements across services.

A recent cost-benefit analysis has estimated the societal return on investment in YVIPs at £4.90 to £1. Detailed analyses help identify where benefits arise to assist partners in agreeing more stable, collaborative funding arrangements and priority setting.

Acute Trusts should work closely with YVIP teams at each site to develop strong local and internal evaluations (discussed above) to underpin re-funding of successful programmes.

We heard from some that there is a limited appetite to fund YVIPs directly from within acute health and to some extent, public health budgets currently. The need to base funding commitments on demonstrable impacts for partners was widely expressed but was not well served by previous evaluations. Some of our interviewees expressed caution based on historical difficulties in developing funding collaborations across service boundaries.

120 Cuts to the Third Sector: What can we learn from Transition Fund applications. 2012 Association of Chief Executives of Voluntary Organisations https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/62535/Analysis-of-Transition-Fund-applications.pdf last accessed 18/12/2019

121 BHF (2008) The development and impact of the British Heart Foundation and Big Lottery Fund heart failure specialist nurse services in England: Final report April 2008

122 BHF Policy Statement: Specialist Cardiac Nursing. 2011 https://www.bhf.org.uk/informationsupport/publications/policy-documents/specialist-cardiac-nursing---september-2011

123 Heart failure specialist nurse care: more questions than answers! British Journal of Cardiology 2019 26::86-7. Report on a National Audit of services https://bjcardio.co.uk/2019/07/heart-failure-specialist-nurse-care-more-questions-than-answers/

5 Formative feedback

A central feature of evaluations for The Health Foundation's programmes is the requirement to produce formative feedback for implementation groups derived from interim evaluation findings. This maximises the internal value and validity of the evaluation and ensures that outputs are more likely to reflect a shared view of the strengths and weaknesses of the project. It also reduces the risk of "surprises" in the final report. We had frequent and valuable communication with members of the implementation team from formal interviews through to ad hoc meetings, emails and calls. We adapted a feedback form to use in meetings to record suggestions and responses (MK). Only a small number of such forms were used in practice but this was supplemented by detailed comments on early drafts of this report and other outputs from the implementation team throughout the evaluation period.

We produced an 'ideal' summary of the interventions including proposals for monitoring outputs and fidelity using the TIDieR approach discussed above which was shared with the Redthread leadership team during the evaluation (5.6.2 and Appendix 6). Some of the topics discussed in the formative feedback sessions are summarised in box 17.

Box 17 Formative feedback topics

Standardised set-up requirements for host NHS Trusts

Work to increase referrals from clinical teams meeting criteria

Development of analysis of Youth Worker support delivered for consenting and non-consenting young people to evidence productivity and impacts

Develop screening processes which increase equal access to the service and allow this to be monitored

Developing further intermediate metrics and outcomes to meet the needs of funders and NHS host sites

Identifying mental health needs during assessment and increase safe and effective working with liaison psychiatry teams

As can be seen from the detailed findings above many of these issues have been addressed by the implementation teams and their clinical partners over the past couple of years. Changes have been introduced either centrally or by site teams, their impacts assessed and those that are found useful have been spread across the Redthread YVIP network. Referral process improvements, clinical 'Champions' and feedback to clinical staff all continue to increase the quantity and quality of referrals reducing barriers and increasing access. Data systems, case recording and analysis methods have all changed and new posts have been introduced to build on these improvements. Training continues to develop for youth workers to help the meet the different needs of young people as the intervention is spread to EDs with diverse population needs. The team, at all levels, undertake constant developmental work refining and improving their service. We hope we have captured some of this in our report but some of our recommendations are already out of date but may be applicable to new sites with no experience of hosting a YVIP.

We are grateful to Redthread staff for the continuous and responsive communication and support for this evaluation. Our attendance at meetings especially has allowed us to experience their commitment to improving the lives of young people at a point of crisis and supporting clinical staff as they deliver care and treatment.

The evaluation advisory group have also contributed many suggestions and detailed comments on this report and have informed our feedback to Redthread. Our final EAG meeting benefitted from participation from the wider youth violence 'community of practice' and again the implementation team. Our findings were presented by AC followed by a discussion. We included an informal exercise focussing on what different stakeholders themselves considered were important outcomes to measure the impact of YVIPs and to comment on their relative importance. We suggested ten areas that might be evaluated and asked participants to prioritise them. They were:

- Re-injury rates or recidivism
- Re-arrest or re-offending rates
- Introduction or re-introduction into statutory services, education and/or mental health services
- Reduction of violence in the wider community i.e. retaliation or public perceptions of safety
- A reduction of costs to the wider community
- The Redthread assessment of risk reduction
- Quality of life of the young person
- Barriers to access for the young person – basic demographics and geography – are they reaching the most hard to reach and vulnerable
- YVIP – are referral pathways into the community successful
- Cost-benefit measures

We asked participants to give written feedback on these outcomes and used a visual exercise allowing them to 'vote' on the relative importance of each to establish areas of consensus.

Re-injury rates, introduction or re-introduction into services and quality of life measures of young people were rated of high importance in the feedback from both activities. Changes in quality of life were also seen as a key way to demonstrate the effects of the intervention but participants were less sure about how this might be conducted in practice. Low follow-up rates and the difficulty of finding measures which might fairly represent a young person's own views and feelings were seen as important but difficult challenges. Validated measures of general health such as the EQ-5D-5L[124] and measures of wellbeing such as WEWBS were discussed but were unfamiliar to some stakeholders and may have less impact as evidence outside of academic circles. Similarly the Redthread risk assessment process was not familiar to those outside the organisation and may benefit from wider promotion and understanding. Re-offending rates and participation in crime were less supported as outcomes measures by those in non-criminal justice roles and this likely represents a bias in the background of participants.

There was some interest in using combinations of outcomes to give greater insight into impacts. For example rates of re-injury and re-introduction into services were seen as potentially shedding light on each other and the mechanisms at work to bring about change. There were some questions about what measures would be used, how to gather this data and how it should be analysed and reported.

Overall the EAG meeting confirmed our evaluation conclusions in many ways. We found both widespread and deep agreement about violence affecting young people despite participants viewing the problem from many perspectives. This agreement included the antecedent causes of youth violence and which important factors could be addressed to reduce vulnerability and involvement in crime as both victim and perpetrator. There was considerably less agreement about how interventions should be implemented in practice, the evidence needed to demonstrate effectiveness and cost-effectiveness and what should be prioritised amongst competing demands on resources across the system.

124 Herdman, M., Gudex, C., Lloyd, A., Janssen, M.F., Kind, P., Parkin, D., Bonsel, G. and Badia, X., 2011. Development and preliminary testing of the new five-level version of EQ-5D (EQ-5D-5L). Quality of life research, 20(10), pp.1727-1736.

6 Limitations of the study

There are a number of limitations to this evaluation project. We did not conduct any evaluation of the impact or effectiveness of the YVIPs directly. There is an increasing body of research and evaluation of YVIPs available to planners and practitioners but this gives only indirect support to providers and prospective host organisations wanting to understand how the intervention would 'fit' within their existing services. We did not systematically collate or review the range of academic evidence but confined ourselves to brief descriptions of key papers and sources. Our aim was to understand the perspectives of different participants as to what evidence was needed, the use to which it was being put and the weight it carried in enabling or hindering expansion of the service. We intend this report to highlight the importance and potential usefulness of evidence whether from local evaluations to larger research studies, but are only able to note that its 'quality' or 'strength' is essentially contested and how it influences policy-makers remains poorly understood[125].

We were unable to negotiate access to all of the sites originally agreed within our HRA approval. This was mainly due to workload and other constraints, both ours and those of Redthread and NHS staff. We were also not able to include data from all of the YVIP sites such as local documentation and so have relied on centrally produced documents which may have introduced bias and reduced our ability to understand variation across different EDs and NHS Trusts. We approached a great many people involved directly or indirectly in addressing and preventing youth violence but this was often through the recommendation of those already involved with the intervention in some way. It is possible that those responding were more favourable to the intervention and we may have missed dissenting voices. We have tried to compensate for these sources of bias and managed to consult others with considerable relevant experience and knowledge of youth violence prevention and lay perspectives in particular through the EAG.

We were unable to access aggregated data about the performance of the YVIPs, EDs and other organisations as little was in the public domain or in a shareable form. One of our key recommendations is that more data on activity and local impacts of YVIPs should be made available to inform debates about adoption, implementation and resourcing of future NHS sites.

We did not interview young people who had received the YVIP service although many of the documents we reviewed contained such self-reports gathered by Redthread and heard the various experiences of Redthread youth "ambassadors". We did approach a local community organisation to facilitate a general discussion with us as part of a regular youth group session in one local community with a significant problem of youth violence but we did not receive replies to these requests. We did discuss the Redthread service with our local NHS youth research PPI group but decided to exclude this evidence eventually as being unrepresentative of the experiences of local youths experiencing violence.

In some cases we only gathered data from informal meetings as a substitute for formal interviews if these could not be arranged. As a result we cannot quote directly from some sources and have tried to limit our use of indirect material and triangulated it with other sources. Similarly we could not formally interview some members of community groups we spoke to and had limited time and resources to contact all but a small number of organisations. Despite this we have tried to include the views of some of these figures as far as possible and to reflect some of their concerns. Finally we were unable to interview many figures with in-depth knowledge of information governance, NHS commissioning and new integrated systems of care. This limits our understanding of how these issues and factors might impact adoption and spread of YVIPs. We have had to rely more on policy documents and figures already involved in the implementation project than we would have liked.

125 Orton, L., Lloyd-Williams, F., Taylor-Robinson, D., O'Flaherty, M. & Capewell, S. The Use of Research Evidence in Public Health Decision Making Processes: Systematic Review. PLOS ONE 6, e21704 (2011).

7 Conclusion

The hospital-based Youth Violence Intervention Programme approach to addressing youth violence and exploitation has been developed, refined and exported by Redthread from a single Emergency Department in 2006 across London and now beyond. This evaluation has examined how the existing services were established, what evidence was used by participants to justify implementation and how the intervention has adapted to serve more young people in different areas of the country. We have tried to highlight the complex multi-level contextual factors which sustain or threaten current provision and could drive or inhibit further spread. Interactions between political, policy and regulatory factors, the entrepreneurial spirit and drive of the charity and the support of highly motivated individuals within the NHS and local government have all been important. The track record of individual YVIPs in EDs shows they can be successful and sustainable and Redthread have achieved expansion at little cost to the NHS so far. Despite this we found that though delivered within the NHS they are not fully 'owned' by it and away from the front-line, the impetus for spread is seen as largely external to the NHS.

Further spread and sustainability of YVIPs depends on closely aligning the objectives and incentives of the NHS with those of potential partners in local government, the police and public health. This can be brought about through the further establishment and maturation of Violence Reduction Units and greater involvement of new NHS structures such as Integrated Care Systems and provider networks. The examples of collaboration at various levels from the front-line to senior leadership described in this report demonstrate how creating a consensus on what evidence 'counts' and how much is enough to justify further investment is possible. Distinctive resolutions of these difficulties will be required for each local population to support negotiation of priorities, collaborative working and joined-up resourcing. However this is achieved in practice, the point at which youth violence and exploitation was acknowledged as a problem for everyone has long been passed.

Appendix 1
Redthread YVIP "Theory of Change"

Figure 3 outlines the 'theory of change' proposed by Redthread to explain the effectiveness of the Youth Violence Intervention Programme within NHS Emergency Care settings. This is an extract from a larger document made available to the evaluation team by Redthread which includes the resulting logic modelling and risk assessment for the Redthread intervention.

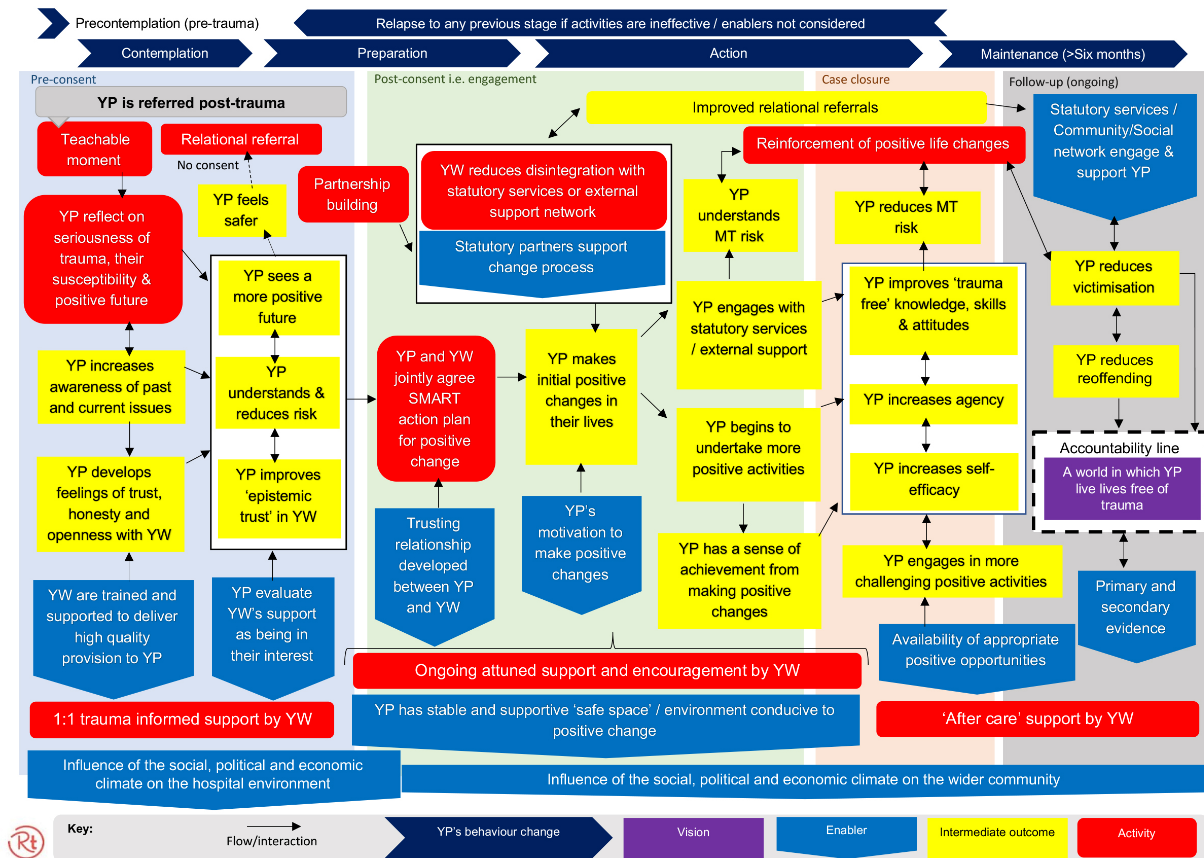


Figure 3 The Redthread Theory of Change – Source: Redthread Theory of Change, Youth Violence Intervention Programme[126]

126 Brendan King 2018. Redthread, London.

The Health Foundation
Redthread
NHS Nottingham University Hospitals NHS Trust

Appendix 2
Outline Interview Schedule

A verbal reiteration that the participant understands the purpose of the interview and verbalises their consent (alongside written consent)

The following elements will be covered by the interviewer:

- Organisational category and role with regard to Redthread intervention
- Overview of participant's involvement in the set-up, monitoring and operation of the Redthread intervention
- Comments and views on the level and quality of collaboration between the organisations involved
- Factors that have aided or hindered collaboration in implementing the Redthread intervention
- Have any adaptations of the programme been required to embed the Redthread intervention within existing services?
- Have there been any negative consequences?
- Adaptations to policies, processes and procedures of the participants' organisation that have been required
- What arrangements are in place monitor and manage the programme in terms of governance, performance and sustainability
- What threats have been identified (external and internal to the participants' organisation) to the future of the service and how likely are they to occur?
- Processes required are in place to share information? Are they effective?
- Costs that have been incurred as a result of the Redthread intervention? How have these been funded?
- What is the potential future demand for a similar intervention in other settings.
- What lessons have been learned (established sites)/what would be required to support initiation of the project (new or proposed sites)?

Appendix 3
"Adoption and Spread" Evaluation Protocol

FULL TITLE OF THE STUDY

The Redthread Youth Violence Intervention Programme: An evaluation to assess the potential for spread and sustainability within the English emergency care system.

SHORT STUDY TITLE/ACRONYM

Redthread intervention: Evaluation of "Adoption and Spread"

PROTOCOL VERSION NUMBER AND DATE

Version 1.0: 10/07/2018

RESEARCH REFERENCE NUMBERS

IRAS Number:	251313
FUNDERS Number:	The Health Foundation: AIMS ID 493327
Sponsor Project ID:	17TR005

SIGNATURE PAGE

The undersigned confirm that the following protocol has been agreed and accepted and that the Chief Investigator agrees to conduct the study in compliance with the approved protocol and will adhere to the principles outlined in the Declaration of Helsinki, the Sponsor's SOPs, and other regulatory requirements.

I agree to ensure that the confidential information contained in this document will not be used for any other purpose other than the evaluation or conduct of the investigation without the prior written consent of the Sponsor

I also confirm that I will make the findings of the study publically available through publication or other dissemination tools in collaboration with The Health Foundation without any unnecessary delay and that an honest accurate and transparent account of the study will be given; and that any discrepancies from the study as planned in this protocol will be explained.

For and on behalf of the Study Sponsor:

Signature: .... Date: ..../......./.......

Name (please print): ....

Position: ....

Chief Investigator: ....

Signature: .... Date: ..../......./.......

Name (please print): ....

KEY STUDY CONTACTS

Chief Investigator & Data Custodian	Dr P Miller Dept. of Research & Education in Emergency & Acute Medicine (DREEAM) philip.miller@nuh.nhs.uk
Sponsor	Nottingham University Hospitals NHS Trust (R&I) Teresa.oleary@nuh.nhs.uk
Funder	The Health Foundation maria.kordowicz@kcl.ac.uk

STUDY SUMMARY

It may be useful to include a brief synopsis of the study for quick reference. Complete information and, if required, add additional rows.

Study Title	The Redthread Youth Violence Intervention Programme: An evaluation to assess the potential for spread and sustainability within the English emergency care system.
Internal ref. no. (or short title)	Redthread Redthread intervention: Evaluation of "Adoption and Spread"
Study Design	Non-intervention qualitative interview, ethnographic and documentary analysis
Study Participants	NHS, Social Care, Local Authority and Third Sector staff as appropriate to the study aims and objectives
Planned Size of Sample (if applicable)	Up to 40 individuals (meeting observations and interviews as appropriate) & approximately 100 documents
Follow up duration (if applicable)	16 months
Planned Study Period	December 2018 – April 2019
Research Question/Aim(s)	Critical examination of the processes undertaken by partner organisations in ensuring the intervention was successfully set up in each location. To identify barriers and enablers to set-up and implementation to inform future expansion How past and current implementation and operational processes affect the fidelity and effectiveness of Redthread's established violence reduction work. Assess the potential for spreading this intervention into other emergency departments/emergency services including resource implications and ensuring a good fit with existing services for this group.

FUNDING AND SUPPORT IN KIND

FUNDER(S)	FINANCIAL AND NON FINANCIALSUPPORT GIVEN
The Health Foundation	Funder and mentoring support
Dept of Research & Education in Emergency & Acute Medicine, Nottingham University Hospitals NHS Trust	Host site for the evaluation team, main employer of the Chief Investigator, provision of R&I support and oversight.
Research & Innovation, Nottingham University Hospitals NHS Trust	Study Sponsor, support with study management and approvals

ROLE OF STUDY SPONSOR AND FUNDER

The Sponsor of the study is Nottingham University Hospitals NHS Trust. The sponsor will ensure that the research is carried out in accordance with the agreed protocol and in conformity with all relevant law and regulation.

ROLES AND RESPONSIBILITIES OF STUDY MANAGEMENT COMMITEES/GROUPS & INDIVIDUALS

This service evaluation will be conducted independently of the Redthread organisation and the NHS staff teams implementing the initiative at the acute hospital sites but there will be considerable coordination with the implementation teams at each site to ensure that the evaluation proceeds as planned and the evaluation team can access data from staff and organisations to meet its objectives. A small steering group will directly oversee the implementation of the protocol and mentorship will be provided to the evaluation team by The Health Foundation.

PROTOCOL CONTRIBUTORS

This protocol was created by the Chief Investigator with comments from various partners in Redthread, The Health Foundation and the sponsor organisation NUH NHS Trust.

KEY WORDS:
- Realist Evaluation
- Service Evaluation
- Qualitative research
- Ethnographic data
- Youth Violence Intervention Programme
- Cross-boundary working
- Children and Young people's Services

1 BACKGROUND

Redthread is a charity committed to reducing violence, abuse and exploitation of children and young people (C&YP). They achieve this by providing direct support to children and young people at the time they present to an Emergency Department for medical assessment and treatment. Contact and assessment of eligible typically begin very soon after a traumatic experience at a time therefore when C&YP are more receptive to the possibility of change require immediate support and help to begin recovering.

Thousands of C&YP attend hospital Emergency Departments annually as victims of serious violence and abuse. More recently public and political concern has grown as a result of increases particularly assaults involving weapons especially knives. Redthread's Youth Violence Intervention Programme (Redthread intervention) embeds youth workers in hospitals to intervene with C&YP in the immediate aftermath. The youth workers (YW) meet young patients as soon as they can: in the ED waiting room, on the ward, or even

in the resuscitation bay in a way that does not interfere with their care. Redthread believes that this moment of intense crisis, when the young person is acutely distressed and often alone in the sometimes daunting environment of a busy hospital, can be a "catalyst for pursuing positive change – a 'teachable moment'".

Redthread YWs build rapport with the young person, mentor and advise them, and support them to make long-term positive plans to break away from cycles of violence and offending whilst undertaking a structured risk assessment. Relevant problems can include exclusion from education, employment or training, a lack of stability in housing, mental health concerns, unstable relationships and reprimands due to criminal activity. Redthread uses partnerships with other organisations within and beyond the NHS to ensure long-term change is possible. The YWs are trained to make referrals on their behalf and can accompany them to initial meetings to ensure transition is smooth after the hospital phase is over. This work aims to disrupt the cycle that can too easily lead to devastated lives and to reduce the demands on the healthcare and justice systems.

2 RATIONALE

There is an uneven record of successful "adoption and spread" of innovative services within the NHS. Many millions are spent on research and innovation but very little of this is devoted to making new services or approaches work3. This poor record goes back many years and cuts across all areas of service provision.

It is vital for the NHS to rollout new services quickly where there is good evidence of effectiveness. Understanding how this is done in practice will enable the NHS and other organisation such as the police and local authorities to meet current and future challenges presented by increasing youth violence. Despite its importance, adoption and spread of innovation has been a poor relation to other NHS enabling activities. And yet without evidence of "what works" to support adopt and spread, effective innovations may remain localised with limited systemic impact.

Resource constraints have led to recommendations to prioritise low cost/high impact innovations (Carter 2016) but putting new services and methods into practice at scale remains challenging and highly context specific. A deeper understanding of the individual innovation, the intended target populations and the service contexts are all required to increase the chances of successful, widespread implementation.

This evaluation will complement other work evaluating the Redthread intervention itself already being completed by other research teams at Redthread sites in London. In addition this evaluation will be carried out alongside a planned research project jointly developed with the University of Nottingham as well as providing formative feedback to Redthread directly. This research will examine the short and long-term effects of the intervention on C&YP in terms of their access to support and use of health, social and criminal justice system services and reduction in risk of future adverse life events. Other research aims include the development of a SMS-delivered risk assessment and follow-up tool and the development and validation of a fidelity "scale" to ensure that the Redthread intervention retains it essential elements when adopted by other sites in future.This study focuses on developing a deeper understanding of how the Redthread intervention can be implemented in new settings to make the service available to as many C&YP at risk of violence as possible.

3 THEORETICAL FRAMEWORK

This service evaluation will use a realist framework to understand how the great variety of organisational and process factors can help or hinder the implementation of violence reduction work embedded within existing service configurations.

These factors include:

- Indicative costings, funding flows and resource constraints
- Inter-organisational boundaries and collaborative "pathway" service delivery
- Information governance and sharing arrangements
- Organisations' and professionals' conceptions of their responsibilities and rolls towards caring for C&YP at risk
- Elements of organisations' structures and cultures which enable complex interventions to retain their effectiveness, despite adaptations in new settings.

The fundamental realist approach is to examine qualitative data from the perspective that linguistic and social concepts have generative causal effects and must be explicitly described and understood to understand how a complex intervention can be transplanted. Each stage from planning, through implementation to the embedding of a sustainable service will be examined.

4 RESEARCH QUESTION/AIM(S)

To understand how a previously successful support initiative to reduce violence and sexual exploitation affecting C&YP presenting to the emergency care system can be adapted, adopted, spread and sustained in new settings to ensure as many C&YP at risk of violence, abuse or exploitation are offered timely care and support across the emergency care system and beyond.

4.1 Objectives

To assemble a comprehensive documentary analysis of relevant organisational policies, statements and other documentation from four NHS Trusts to assess their contribution to making the integrated Redthread intervention services work effectively.

To conduct interviews with staff at all levels involved in enabling the intervention at established sites and prospective sites.

To conduct ethnographic observations of a convenience sample of planning, implementation and operational meetings and other interactions within the various organisations with a focus on the building of collaborative and trusting relationships between professional groups with often differing responsibilities and remits.

To synthesise this information into a coherent report for an audience of health planners, commissioners and providers to support decision-making regarding adopting and sustaining similar Redthread intervention initiatives.

4.2 Outcomes

there are no pre-specified outcomes or end-points for this service evaluation.

5 STUDY DESIGN and METHODS of DATA COLLECTION and DATA ANALYSIS

Study data collection will consist of a pragmatic and opportunistic combination of staff interviews, ethnography and documentary analysis. No direct observation of Redthread work is planned, as there will be no involvement of service users or professionals at the point of care in this work. We aim to involve C&YP who are not currently service users to gain an understating of their views on such services using existing Patient and Public Involvement (PPI) within the various organisations.

5.1 Interviews

Interviews will be sought with a variety of staff involved in the planning and delivery of the Redthread intervention at four sites. Interviews may be conducted in person as part of planned data gathering visits to each site or by phone when requested or necessary to ensure timely access to busy professional participants. All interviews will be digitally recorded and labelled with a study ID composed of site/role markers to help preserve the context and perspective of the participant without allowing identification.

Transcripts will be produced (by a trained transcriber within the host organisation) with any identifying material removed (this process will be backed up by further anonymization where necessary during the primary analysis (see below). Interview recordings will be downloaded onto NHS computers and protected by limiting access and the use of passwords and encryption. Recordings will be deleted in accordance with the NUH trust policy for identifiable data at the time that the final report and any other publications are produced or at two years from the end of the study period whichever is soonest. This will allow for data validation and any monitoring required. The consent process will include permission to include anonymised quotes in the final report and publications where this is agreed and where this contributes to the aims of the study.

5.2 Ethnography

Evaluation team members may seek to observe a range of different interactions to gain understanding if the Redthread intervention in situ. These could include more or less formal meetings, professional activities of relevant staff in non-patient settings, outreach and training events and so on. Members of the study team (primarily the Research Assistant) will attend a variety of operational and strategic meetings opportunistically during the data collection phase of the study but by prior arrangement. Other interactions may be observed opportunistically if they are thought to provide valuable data e.g. promotional or out-reach events and do not involve service users.

Field notes will be made on laptops or paper as required alongside digital audio recordings where possible (and agreed with participants) to ensure accuracy of data capture and to facilitate accurate analysis. Digital recordings will be downloaded onto the host network directly and stored for transcription in limited access, password-protected study folders. Where this is done off-site a VPN connection will be employed. Data collection will reflect the collaborative nature of the Redthread intervention roll-out and will be selected where they are cross-disciplinary and/or cross organisational and/or relate to the planning, development and sustainability of the programme at each site.

Ethnographic work yields significant amounts of information about how the representatives of each organisation serve and adapt the aims of their respective bodies whilst negotiating joint aims and objectives. Creating effective working relationship is essential to the adoption and spread of complex health and social care interventions and ethnography is a rich source of information not fully captured by individual or documentary data.

5.3 Documentary data

Documents will be obtained with permission from each site. These will be selected to uncover structural, regulatory and procedural which impact on the provisions of the VYIP. Documents will be identified iteratively during the recruitment and interview of participants from each organisation. If new types of documents are identified previous sites will be asked for any similar material to achieve a more comprehensive overview and synthesis.

Documents will be transferred to host site as electronic versions wherever possible on detachable encrypted and password protected pen or laptop hard drives or via the NHS, police and government ".net" secure email system. All documents will be anonymised (logos and names etc will be removed), identified by an ID code and stored electronically at the host institution (NUH). Primary copies will then be deleted.

The NHS computer network at the host site is password and access restricted. Only members of the immediate study group will have access to identifiable material. The confidentiality provisions of the host site will be detailed in employment contracts to the same extent as for clinical NHS staff. Those involved in secondary analyses will only have access to anonymised and coded information.

5.4 Analysis

A process of collation and synthesis will occur across three stages:

5.4.1 Primary analysis: the collection and transcription/anonymization of interview and documentary data and "first pass" coding into theme/staff group/organisation constructs will be undertaken by the research assistant under the supervision of the Chief Investigator. It is expected that there will be a complex mix of convergent and divergent themes emerging across staff and organisations at this stage. Documents will entered into a database for analysis using the NVIVO package, the widely accepted academic standard for this type of study data. A content analysis process will be used to understand the structure of relevant material and its relationship to the development of the initiative itself and how it interacts with the interview data collected. A realist framework will be developed to interpret the various data in the context of the study aims and objectives.

5.4.2 Secondary analysis: the primary data analysis (but not primary data) will be presented and discussed at monthly steering group meetings. This will allow us to assess the progress of the theoretical framework merging new information over time. These meetings will inform both the ongoing evaluation (modification of interview schedules, alternative sources of documentary evidence) and the final report as it is developed

by the CI. These meetings will also allow participant representatives to "member check" the findings as they emerge to increase external validity and the value of the final results. Redthread will be represented at these meetings to introduce a "formative" strand to the work to increase its value to the team in their ongoing efforts to spread the Redthread intervention beyond its current base.

5.4.3 Final Analysis: once a matrix of interview and documentary themes has emerged the final analysis will seek to pool such information under meta-headings of consequence for the further adoption and spread of the intervention. These will be split broadly into promoting and inhibiting factors where possible. In particular it is anticipated that where successful implemented there will be specific factors which allowed the intervention to progress to implementation. At this stage a wider group of contributors will have a chance to comment on the results to enhance the validity of the final report. These groups will include those who contributed data and others from their organisations along with patient and public representatives (from the Redthread and NUH ED PPI groups).

5.4.4 Reporting: A final report will be produced in conjunction with the sponsor and funder. The Health Foundation evaluation and implementation "mentors" will form part of this final production stage.

6 STUDY SETTING

Interviews will take place primarily within NHS, Local Authority or third sector organisation premises as required or by telephone at the discretion of the participants. Interviews will be conducted in private at all times.

7 SAMPLE AND RECRUITMENT

7.1 Eligibility Criteria

All staff in each organisation with a tangible role (via their direct activities, role or responsibilities with their organisation) to the C&YP violence reduction initiative, are in principle eligible for inclusion subject to their agreement and written consent.

There are no formal inclusion or exclusion criteria. NHS patients or those receiving support from Redthread after discharge will be approached for this study.

7.2 Sampling and Recruitment

The sampling will be opportunistic. Initial emails, written and/or telephone approaches will be made to participants via senior staff within each organisation. Participant organisations will be asked to publicise the study within their teams to elicit further volunteers. The evaluation team will not pre-specify the nature or media for this publicity but will include the various means used in the methods section of the report to further assess any sampling biases. In the case of NHS organisations suitable and willing participants will be identified via the Principle Investigators listed in the IRAS application and members of the Redthread teams at existing or planned sites.

Further participants may be identified iteratively through 1) documents e.g. meeting minutes or 2) recommendation by initial participants. It is likely that only a proportion of identified individuals will volunteer or can be accommodated within the resources and time-scale of this evaluation.

Attention to the final list of participants will be paid to assess the degree to which this sample may introduce bias and further purposive sampling may be required for under-represented groups. The sensitivity of the report findings to any residual bias will be considered and detailed in the final report.

It is important for the validity of the study that access to data (from any source) is not hampered by factors themselves relevant to the study findings. A repeated process of negotiation and emphasis on the importance of confidentiality should ensure that all relevant information both positive and negative is available for inclusion in the final analysis.

Information about the study will be produced for circulation within participating organisations setting out its aims and objectives, processes and how information will be protected. It is hoped that some further individuals may volunteer at this stage. Once a staff member makes contact to volunteer this will be formally

documented in the formal consent process or via post in the case of telephone interviews.

No payments will be made to individuals for their participation but the study budget includes a sum for each organisation to reflect any costs incurred.

7.2.1 Size of sample

No formal sample size will be calculated. The study steering group will be responsible for assessing the need for further or alternative information. We estimate that up to 40 individuals will participate to represent as many roles within as many organisations as possible. We do not envisage that "saturation" will occur given the heterogeneous nature of the sample and the possible variety of data which is potentially relevant to the topic.

7.3 Consent

Informed, written consent will be obtained prior to the participant prior to taking part in individual interviews. A full explanation of the aims and objectives of the study, the transfer storage, transcription, anonymization and analysis will be given verbally supported by a combined participant information and consent form. Participants will be able to withdraw data they contributed up until the point that it is initial coding is incorporated in the secondary analysis.

8 ETHICAL AND REGULATORY CONSIDERATIONS

For the service evaluation to deliver useful information for future adopters it is entirely possible that the evaluators may need to collect confidential and sometimes controversial material from participants. The evaluators will work with participants (interviewees, document authors, authority figures in each organisation) during and after data collection to ensure that specific people and organisations remain anonymous. Sites and personnel will be referred to generically via their role and in the case of organisations they will be categorised by function only (e.g. "health care" or "third sector organisation").

8.1 Assessment and management of risk

Interviews and other data collection poses no risk to the researcher or participants over and above the level experienced as part of NHS or local authority managerial workers. There is no requirement to approach members or the public or patients for this service evaluation.

8.2 Research Ethics Committee (REC) and other Regulatory review & reports

HRA approvals will be in place prior to any site visits or data collection. As part of the development of this protocol and fulfilment of the requirements to assess the resources implication of the protocol, contact has been made with Principle Investigators (normally the Lead Clinician for the Redthread intervention) in the following organisations:

- Nottingham University Hospitals NHS Trust
- Birmingham Heartlands and Birmingham Queen Elizabeth
- Luton and Dunstable NHS Trust
- St Mary's Hospital, Paddington

8.3 Amendments

It is not envisaged that any amendment will be required after HRA and local approvals are given.

8.4 Peer review

This protocol has been developed in conjunction with the Redthread national team, representatives of The Health Foundation and NHS staff within the host organisation (Emergency and Major Trauma Departments and Research and Innovation).

8.4 Patient & Public Involvement

No patient and public involvement has been undertaken as part of developing this protocol beyond informal discussion with Redthread volunteers (e.g. at Hive 2018) and secondary views of Redthread staff. The

intervention and other elements of the work surrounding the youth violence intervention programme have received considerable and ongoing public involvement in the form of symposia, patient representatives within the provider organisation and other public and political outreach work and engagement. Where possible we may seek access to speak to PPI groups within the participating organisations subject to recording, ethnographic and consent processes described above.

8.5 Protocol compliance and governance

The work of the study team will come under the direct supervision of the evaluation steering group who will meet monthly to review progress amongst other functions. In addition to this the evaluation will be overseen by a clinical liaison group within the sponsor organisation (NUH). Finally the evaluation team will receive ongoing support and oversight from The Health Foundation. A schedule of interim reporting has been agreed underpinned by informal support from experienced evaluators and researchers from Rubis QI (https://nhsrubisqi.co.uk/) who have been contracted to support the wider adoption and spread programme funded by The Health Foundation nationally.

8.6 Data protection and participant confidentiality

This evaluation is fully compliant with the General Data Protection Regulation 2018. The data custodian is the Chief Investigator for the study. The service evaluation will collect personal and professional information regarding individuals and organisations only to facilitate the conduct of the study e.g. arrange interviews and observations etc. A participant database detailing the contact details and study activity of all participants will be stored on restricted-access network protected by password and will be stored inside the network of Nottingham University Hospitals NHS Trust. Contact details will be stored on mobile devices as required to ensure efficient conduct of the study and the information governance policy of the sponsor origination will be followed. All email correspondence and transfer of documents will be via N3 compliant email systems e.g. NHS.net (or equivalent Trust systems using encryption functionality). In the case of non-NHS organisations government-approved systems (e.g. gov.uk email addresses which also comply with N3 standards) will be used.

By preference evaluators will work within an NHS network environment when collecting and processing confidential participant data. However, this will not be possible for site visits and other data collection and transfer. Where a laptop is used remotely an N3-compliant VPN connection will be used to access or transfer files and process data directly to and from the host NHS network. No study participant data will be stored on portal hard drives. In the case of collecting policy, training and other internal documents secure government email environment (".net" addresses) will be used for file transfers but if necessary encrypted and password protected storage devices will be used.

Aggregated activity and process data may be collected from participating organisations to facilitate understanding the workings of the Redthread intervention in a variety of settings. Individuals will not be identifiable from such information and the ICO guidance on the anonymization of such data will be followed.

In the case of voluntary and community sector and non-state organisations an assessment of email security will be made in each case and a suitable secure route will be used to transfer information from such organisations as required. No identifiable information from any patient or service user will be collected.

Field notes will be anonymised at source and documents will be anonymised by the study team prior to storage and analysis. Field notes will identify individuals by role and organisational type only.

Interviews will be recorded using a digital recording device and files returned in this format for downloading on to the host trust network.

Transcription of the interviews will be undertaken by a trained administrator within the host site working closely with the study team. All identifying information will be removed in two stages: by the transcriber and then as a second check by the researcher during the primary coding. Individual quotes will be labelled with the role and context (interview vs observation) only. Interviewees will be allocated study ID composed of a roll and organisation category and a number for analysis and by role only for quotes in reports or publications. This will be stored within the database alongside contact details to allow identification if required by regulatory

authorities or for other legitimate reasons. Only members of the immediate study team will have access to files with such identifiable information.

The chief investigator will act as data custodian for all data with identifiable characteristics. Data shared to the study steering group will be secondarily anonymised via the coding process.

8.7 Indemnity

This is a low risk qualitative study. The sponsor agrees to accept liability for any risk arising from this project.

8.8 Access to the final study dataset

The final dataset will comprise transcripts, anonymised source documents and coded and other secondary datasets. The original interview recordings will be deleted. Contact details and other participant information detailed above will be deleted once the final report is produced and agreed with partners as required.

9 DISSEMINATION POLICY

9.1 Dissemination policy

The interim and final reports will be produced in conjunction with the Health Foundation. As funder they will have executive oversight of the content, format and publication of any materials produced as a result of this work.

Academic publications may be created as appropriate to ensure the findings reach as wide an audience as possible. The findings of the study will be actively disseminated back to the collaborating organisations and their staff. Other modes of dissemination will be employed as appropriate such as press releases, podcasts, conference presentations and other appropriate methods to increase the impact of the findings.

9.2 Authorship eligibility guidelines and any intended use of professional writers

The final report will be written by the study team. Initial drafts of interim and final reports will be produced by the evaluation assistant and the final draft edited by the Chief Investigator. The Health Foundation will own the rights to any intellectual property arising from the work.

Appendix 4 Evaluability Assessment

The evaluability assessment below summarises our broad overview of the Redthread intervention and is not restricted to the primary aims of this particular evaluation study.

Evaluability Assessment[127] – Redthread

Project Design	
Clarity?	Short-term processes and impacts and are clearly defined. Internal data collection and analysis needs improvement. Longer-term impacts (return to education) and outcomes (reduction in re-injury, reduced self-reported risk) are identified and defined sufficiently to measure and could be analysed using suitable controls. The causal processes to achieve the intended outcomes are partially defined.
Relevant?	The target group for the intervention are defined in terms of age and setting for the intervention but the detailed criteria for inclusion vary to some extent e.g. DVA, 'seriousness of assault'
Plausible?	The various components of the intervention are in themselves desirable and likely to lead to the intended outcomes for young people by connecting young people to established services, encouraging cooperation with police etc
Validity and reliability?	There are a range of components of the intervention such as processes and referral pathways which are available for measurement and they are both potentially valid and reliable but some require data collection outside of the host organisation (NHS). A range of self-reported outcomes for individuals who accept the intervention and agree to follow-up are assessed at 6 months internally (Redthread). Work is ongoing to capture some process data (e.g. risk assessments, referrals) for young people not accepting the full intervention but there is currently no way to assess the outcomes or impacts for this group. No outcomes are collected for comparable controls.
Testable?	The intervention is testable in principle given a suitable contemporaneous control group. An academic evaluation of the project is being undertaken by the HERON group at KCL. A further comparison is planned using data from the site in Nottingham. Data sharing between organisations to measure non-health impacts has not been agreed so far. Partner organisations recognise the difficulty of allocating the intervention randomly or comparing YVIP worth non-YVIP sites. These factors have restricted the external validity of evaluations completed so far.
Contextualised?	The way in which the intervention fits within the context of major trauma care and other secondary care services is well understood. Coordination with other services is primarily managed through operational meetings at all sites and other quality assurance and safety monitoring are in place. Clinical supervision and information sharing within host Trusts are well established and could be evaluated.
Consistent?	The Theory of Change is described consistently across various the project documents, training and SOPs. There is no formal logic model which connects elements of the intervention with specific outcomes. There is currently no mechanism to assess the fidelity of the intervention across sites or over time.

127 This checklist has been extracted from pages 19-23 of the following report: and adapted from https://www.betterevaluation.org/en/themes/evaluability_assessment#eval_assess_6 last accessed 05/06/2019 Davies, R., 2013. Planning Evaluability Assessments: A Synthesis of the Literature with Recommendations. Report of a Study Commissioned by the Department for International Development. Available on at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/248656/wp40-planning-eval-assessments.pdf

Complexity?	The complexity and variation of the intervention is dictated by the needs of the individual person receiving the service. The assessment process is clearly defined, comprehensive and evaluable. The risk assessment process is being updated. The causes of youth violence are highly complex and the intervention is relatively short and involving onward referral to a range of further statutory and non-statutory services.
Agreement?	There is a high degree of agreement across the current stakeholders as to the need to address the problems perpetuating youth violence and the aims and objectives of the YVIP service delivered by Redthread. The RT team carry out considerable stakeholder engagement work at each new site as part of the set-up process and this work continues as each implementation matures including regular operation and steering groups. The context within each catchment area such as the degree to which there is an existing and functional multi-agency approach to youth violence reduction involving all local authorities, police and NHS partners, varies considerably. In some cases this places a great burden on Redthread to act as 'go between' and limits the effective coordination of the service within the wider community. The Redthread intervention has developed strong working relationships with many relevant service providers in each location. The complexity of the criminal justice system and local authority landscape in many settings increases the difficulty for a small organisation to coordinate meeting the needs of young people. Redthread do not currently feedback about service availability in a coordinated way.

Information Availability	
Is a complete set of documents available?	There is a complete set of documents for the RT intervention available with some in development. There is a perceived need to develop further documentation in specific areas such as Information Governance. We have not been able to obtain internal documents from all NHS sites. Redthread have shared an extensive collection of reporting and other stakeholder documents as well a detailed minutes of meetings etc.
Do baseline measures exist?	There is limited baseline data available within the NHS Trusts we have examined so far. Although the potential target group can reliably be identified in most trusts (more or less defined by inclusion in ISTV data submissions) the arrival of RT itself may increase the identification of individuals at risk and alter the population for analysis. Work on data availability is ongoing and at various stages across the current host trusts. Linked baseline data across NHS, LA and CJS services are not available to assess many important outcomes.
Is there data on a control group?	There are no data or analyses currently available using a robust control group. A stepped-wedge design approach has been considered but not pursued during recent spread of the service. The opportunity exists to implement this strong design as part of planned roll-outs in greater London or across Home Office identified target cities. Research capacity and funding (as a stand-alone bid or as part of a funding package) will be required to deliver this design to a sufficiently high quality. Other comparative designs such as controlled before and after studies are being planned but agreement to link data will be necessary to allow robust comparative measurement.

Is data being collected for all the indicators?	Some data sources are available to allow monitoring of the effectiveness of the service e.g. internal NHS data. A service evaluation using such data is planned which will assess the impact of the service on re-attendance and re-injury rates. An academic partner is conducting a mixed methods evaluation and other internal NHS evaluations are in progress but not published so far. Research in such contexts is difficult but increasingly possible within current legislative frameworks (see https://www.adruk.org/) and regulations. Experience of these techniques is limited to academic or central government institutions and to large scale evaluation projects.
Is critical data available?	Currently there is good and improving data available for young people who consent to service within the provider and host NHS organisation(s). However considerable RT activity is ad hoc responding to the immediate needs of young people many of whom accept this help but do not consent to ongoing engagement (approximately 50%). Work is ongoing to use non-identifiable data to measure this activity but by definition outcome data are not available for this group.
Is gender disaggregated data available?	Gender disaggregated data is available to RT internally and to NHS host Trusts. Racial monitoring is also possible but data quality for the whole target population is poor. As part of the formative evaluation the use of this data will be examined and the feasibility of using socio-economic and other relevant indictors will be explored to understand barriers to access and uptake.
If reviews or evaluations have been carried out…	Limited evaluations have been undertaken but as discussed above these have been limited in scope, have not used outcome data from partner organisation and have not included robust comparative or experimental designs.
Do existing M&E systems have the capacity to deliver?	Core M&E functions are undertaken centrally by RT and there is an established plan to develop and improve monitoring across sites. RT devotes considerable resources to meeting the monitoring needs of its many partners. In many cases partner organisations and funders have not required comparative or outcome analyses as part of their agreements with RT.

Institutional Context	
Practicality	
Accessibility to and availability of stakeholders?	There is considerable variation across sites as the degree and pattern of NHS stakeholder engagement. RT recognise that engagement is needed at frontline and senior management levels but this has not always been possible to achieve or maintain. A pragmatic approach has been taken by RT and efforts to re-engage are ongoing. It is unclear what effect this variation has had on delivery.
Resources available to do the evaluation?	There are adequate funds available to deliver both this adoption and spread evaluation and the planned impact evaluations at KCL and NUH. As discussed above there is limited capacity to deliver an experimental or otherwise controlled evaluation of sufficient size to generate robust and comprehensive measurement of the effectiveness of the service.
Is the timing right?	There is currently heightened awareness of and appetite to address the problem of youth violence across government and government services. This evaluation will be delivered as part of the current funding cycle for the East Midlands expansion. Redthread services are now maturing in many NHS sites and there is an increasing need for strong evaluation data to ensure these services are sustained. It is hoped that further experimental evaluations can run alongside future expansions.
Coordination requirements?	There appears to be demand across other NHS ED sites for the YVIP and there are currently requests to tender for further expansions from major funders. There is currently no consistent model for integrated funding across Health, CJS and LA agencies. Gain share models have been proposed and the Violence Reduction Unit system being implemented provides an opportunity to negotiate an effective multi-agency response to violence which includes an acute NHS component.
Utility	
Who wants an evaluation?	This evaluation is funded as part of the East Midlands roll-out by the Health Foundation. Our work has revealed various audiences keen to see further evaluations of the Redthread intervention which address their distinct priorities. As services mature there is a need to measure comparative impacts in a competitive funding landscape.
What do stakeholders want to know?	A variety of defined and therefore measurable outcomes have been proposed. Stakeholders wish to understand the impact of the Redthread intervention in terms of: the impact on their own organisational workload, capacity and priorities; the impact of the service on reducing future demand for services; the short and long-term benefits to young people; the level of unmet need; relative cost-benefit or opportunity cost of investing in YVIP within the NHS.
What sort of evaluation process do stakeholders want?	We have collected considerable information about the detailed requirements of the various stakeholders. Youth violence is a multi-dimensional problem and so full evaluations are complex and expensive. We are unsure that there is currently an appetite to address these issues collaboratively. There may be a lack of capacity/expertise within smaller organisations to utilise administrative data to evaluate services locally although some NHS centres are conducting or involved in evaluations currently which should improve the evidence-base and give greater confidence to encourage further adoption.

What ethical issues exist?	There are various ethical issues constraining the evaluability of the Redthread intervention. First most experimental research designs are ruled out because they would restrict access to an established service for some individuals (e.g. random allocation). Second there are considerable barriers to the collection and linkage of data but these are not as great as many stakeholder appear to believe. The context of youth violence, where engagement would act as a significant confounder, mean that a form of blanket exemption from individual consent would be required for larger evaluations. Such exemptions are in place for similar (often national) research, registry and evaluation projects under Section 251 of the NHS Act 2006. There is no such barrier to individual organisations evaluating the services they provide and for organisations to share aggregated (if not linked) data. Third the ethical review requirements are differ between organisations and sectors. The obvious route is to collaborate and agree evaluation plans at the outset of new projects or funding rounds.
What are the risks?	There are risks in evaluating complex health interventions. Choosing the correct indicators to demonstrate the effectiveness of YVIP that are robust and of interest to the various services is not straightforward. Failure to show a significant benefit may jeopardise an effective intervention but this should be balanced against the need to justify funding YVIP over another intervention. Meaningful outcomes may take many years to emerge and so the selection of proxies which can be measured on the time scale of conventional research also poses risks both from lack of external validity and of reliable causal, as opposed to assumed, mechanisms. Finally there is a risk that an evaluation will fail to capture a sufficient range of outcomes to address the concerns of all stakeholders. Research studies so far have shown mixed results, are not generalizable to the UK and have methodological flaws. The greatest risk to adoption and spread of the Redthread YVIP lies in a failure to adequately evaluate the increasing number of YVIPs in the UK as existing funding comes up for review.

Appendix 5
NOMAD Questionnaire

"We would like you help us understand the implementation of the RedThread Youth Violence Intervention Programme in your Emergency Department. We understand that people involved with RedThread have different roles, and that people may have more than one role."

Section A – About you

From the statements below please choose an option that best describes your main role in relation to RedThread:

A 1. How many years have you worked in your local trust in either ED or Major Trauma? ☐

A 2. How would you describe your professional job category? I.e. Nursing (ED or Major trauma), Medical (ED or Major trauma), Safeguarding or non-registered support worker.

☐

Section B – General Questions about the intervention

B 1. When you refer to Redthread, how familiar does it feel?
Still feels very new (0) vs Feels completely familiar (10) ☐

B 2. Do you feel that Redthread is currently a normal part of your work?
Not at all (0) vs Completely (10) ☐

B 3. Do you feel that Redthread will become a normal part of your work?
Not at all (0) vs Completely (10) ☐

Section C – Detailed questions about the RedThread intervention.

Statements assessed by participants on a Likert scale of 5 levels from "Strongly Agree" to "Strongly Disagree"

	Strongly Agree			Strongly Disagree	
	1	2	3	4	5
I can see how Redthread differs from usual ways of working	☐	☐	☐	☐	☐
Staff in this organisation have a shared understanding of the purpose of Redthread	☐	☐	☐	☐	☐
I understand how Redthread affects the nature of my work.	☐	☐	☐	☐	☐
I can see the potential value of Redthread for my work	☐	☐	☐	☐	☐

	Strongly Agree			Strongly Disagree	
	1	2	3	4	5
There are key people who drive Redthread forward and gets others involved	☐	☐	☐	☐	☐
I believe that participating in Redthread work is a legitimate part of my role	☐	☐	☐	☐	☐
I'm open to working with colleagues in new ways to use Redthread	☐	☐	☐	☐	☐
I will continue to support Redthread	☐	☐	☐	☐	☐
I can easily integrate Redthread into my existing work	☐	☐	☐	☐	☐
Redthread disrupts working relationships	☐	☐	☐	☐	☐
I have confidence in other people's ability to utilise Redthread	☐	☐	☐	☐	☐
Work is assigned to those with skills appropriate to assist Redthread	☐	☐	☐	☐	☐
Sufficient training is provided to enable staff to work with Redthread	☐	☐	☐	☐	☐
Sufficient resources are available to support Redthread	☐	☐	☐	☐	☐
Management adequately supports Redthread	☐	☐	☐	☐	☐
I am aware of reports about the effects of Redthread	☐	☐	☐	☐	☐
The staff agree that Redthread is worthwhile	☐	☐	☐	☐	☐
I value the effects that Redthread has had on my work	☐	☐	☐	☐	☐
Feedback about Redthread can be used to improve it in the future	☐	☐	☐	☐	☐
I can modify how I work with Redthread	☐	☐	☐	☐	☐

Would you like to tell us anything else about your experiences of working with RedThread or the problem of children and young people attending after violent injury? Please do not include any recognisable personal or patient information. (freetext answer)

Appendix 6
TIDieR template: YVIP

Details of the Redthread YVIP set out in line with the TIDieR template for reporting on evaluations of complex interventions[128]. This description was agreed with the Redthread team to give a summary of the YVIP as part of the formative feedback.

Project Title				
Redthread Youth Violence Intervention Programme for young people attending Emergency Departments after adversity-related injury				
Rationale, theory, or goal of the elements essential to the intervention				
• Maximise the potential of the "teachable moment" to change life course of a young person in the aftermath of a crisis or incident • Increases in violence and significant injury involving young person • Increases in abuse and sexual violence and exploitation • Underserved population less likely to engage with existing services • Non-judgemental approach by independent youth workers • Embedded with in ED clinical service • Follow-up young person beyond Acute hospital boundaries • Cross-organisational working • Rigorous and repeatable risk assessment • Co-production of safety plan with young person • High standard of monitoring and data collection and analysis within the service				
Processes and Procedures				
What?	**Who?**	**How?**	**Where?**	**When?**
Referral & screening	• Youth Worker (proactive screening) • ED staff (direct referral) • Young person (self-referral after publicity materials) • Family member or significant other (publicity materials)	• Access to EHR • Phone • Digital task management system (Nerve Centre) • Email • Face to face • Pager	• ED • Major trauma wards • Specialty wards • Childrens' Hospital wards	• As soon as practicable after attendance • After admission to ward • Morning after overnight attendance • After delayed referral

128 Hoffmann, T.C., Glasziou, P.P., Boutron, I., Milne, R., Perera, R., Moher, D., Altman, D.G., Barbour, V., Macdonald, H., Johnston, M. and Lamb, S.E., 2014. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. Bmj, 348, p.g1687.

First approach – consent to engage	• ED clinical staff • Youth Worker in person	• In person • Phone call	• ED department • Major trauma wards • Other wards • Outpatient areas • Safe places outside NHS	• As soon as practicable after attendance
Risk Assessment and baseline information	• Youth Worker with young person (and family or significant other)	• Face to face conversation • Pro forma assessment pack	• Private space in ED • Ward area	• As soon as possible after physical and mental health needs are met
Co-produced Safety plan	• Youth Worker with young person	• Pro forma assessment pack	• ED • In patient wards • Mutually agreed safe place after discharge	• After collection of all relevant information
Support package delivered	• Youth Worker Parent/guardian/ significant other • Dept of Psychological Medicine • NHS Safeguarding team • Police • LA social work teams • IDVA (some sites) • Voluntary and community groups	• ?	• RT offices within host NHS organisation • Attend meetings with or without CYP • Collaboration with other agencies and services	• ASAP • Up to 12 weeks support on average
Follow-up	• Youth Worker	• Telephone call		• At six months
Ad hoc further support	• Youth Worker			• Open ended

Materials/Resources

What?	Who?	How?	Where?	When?
Consent and information card	• Youth Worker	• Given to young person Given to family	• In ED • Acute wards	• At first approach

Assessment pack	• Youth Worker with young person	• Full or partial assessment	• ED • Wards	• ASAP in line with need for other care and assessment

Modifications to intervention		
What?	**When/where?**	**Why?**
Collaboration with IDVA	• Certain sites	• Not a specialist DV service
Immediate referral to other agency with or without consent	• Any contact with young person potentially	• Safeguarding concerns • Immediate harm • Significant Mental Health needs
Non-embedded service	• Potential development of an intervention	• Smaller department which cannot support F/t YW

Monitoring and Fidelity		
What?	**How/who?**	**When?**
Service outputs and activity	• Operational Manager at each site	• Monthly
Clinical Supervision and Feedback	• NHS Safeguarding team • RT team leaders	• Two weekly Yearly/ad hoc
Ongoing training and development	• RT teams leaders • Centrally planned training • HIVE attendance etc	• Ad hoc
Contractual Monitoring		
Operational and Steering group meetings at each site	• Feedback to funders or host organisations	• Quality Assurance • Support sustainability • Resolve operational issues
Activity collection	• Electronic staff records (some sites) • Lamplight – external Redthread database • Paper records (some sites)	Internal monitoring Benchmarking against agreed metrics
Outcome data collection (Impact box outcomes framework 2019)	• Redthread staff • Partner organisations (routine data and NHS staff attitudes and behaviours) • Internal analytical functions	• Short medium and long term outcomes • Screening and engagement • High level measures of improved wellbeing and safety

The Health Foundation
8 Salisbury Square, London EC4Y 8AP
t +44 (0)20 7257 8000
e info@health.org.uk
@HealthFdn
www.health.org.uk

ISBN: 978-1-911615-55-2
Registered charity number: 286967
Registered company number: 1714937
©2020 The Health Foundation

Redthread

NHS
Nottingham
University Hospitals
NHS Trust