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Review Article

Suicide and probation: A systematic review of the literature

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ABSTRACT

A narrative systematic review was undertaken of the literature concerning the health of people on probation. In this paper, we provide an up-to-date summary of what is known about suicide and suicidal ideation and probation. This includes estimates of prevalence and possible predictors of suicide and suicidal ideation. Searches were conducted on nine databases from January 2000 to May 2017, key journals from 2000 to September 2017, and the grey literature. A total of 5125 papers were identified in the initial electronic searches but after careful double-blind review only one research paper related to this topic met our criteria, although a further 12 background papers were identified which are reported. We conclude that people on probation are a very high risk group for completed suicide, and factors associated with this include drug overdose, mental health problems, and poor physical health. There is a clear need for high quality partnership working between probation and mental health services, and investment in services, to support appropriate responses to suicide risk.

1. Background

The number of people on probation in England and Wales is considerably larger than the number of people in prison, with 261,196 people in contact with probation in England and Wales[1] on 30th of June 2018 (Ministry of Justice, 2018). Whilst not a homogeneous group, this population often experience social exclusion and deprivation, and have a high prevalence and complexity of health problems when compared to the general population (Binswanger et al., 2016; Brooker, Sirdifield, Blizard, Denney, & Pluck, 2012; Brooker, Syson-Nibbs, Barrett, & Fox, 2009; Pari, Plugge, Holland, Maxwell, & Webster, 2012). Many people in contact with probation experience other negative social determinants of health such as unemployment and homelessness.

Recent policy changes in England concerning the delivery of probation services were described in the first paper in this series, which was on mental health (Brooker et al., 2020). In short, for a brief period from 2015, medium and low risk probation clients were managed by the private and voluntary sector. The current policy direction is towards renationalisation (HC Deb, 2019).

Clinical Commissioning Groups (CCGs) are responsible for commissioning the majority of healthcare for offenders in the community (NHS Commissioning Board, 2012, 2013) but previous research suggests that many of them are unaware of this responsibility (Brooker & Ramsbotham, 2014; Brooker, Sirdifield, Ramsbotham, & Denney, 2017). Commissioning decisions should be informed by Joint Strategic Needs Assessments prepared by CCGs and local authorities through Health and Wellbeing Boards (Department of Health, 2013). Questions remain about whether current health provision is meeting the needs of people on probation. There is a need to identify the most effective ways of meeting probationers' needs.

The sub-study reported here was one element of a much larger study which aimed to investigate the range and quality of healthcare for people on with probation in England, and to produce a commissioning toolkit including:

- Likely health needs of this population
- Optimal commissioning strategies, and
- Examples of best practice and ways of overcoming barriers that healthcare commissioners, probation workers, and health

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[1] This figure includes those on community sentences, suspended sentences, pre-release supervision and post-release supervision that are in contact with either the National Probation Service (NPS) or a Community Rehabilitation Company (CRC). Throughout this paper, we use 'on probation' to refer to all of these apart from those on pre-release supervision i.e. all those in community settings.

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practitioners can use to measure and improve probationers' health, and the quality of healthcare for this group

Other aspects of the study are being reported elsewhere and the commissioning toolkit can be accessed here: probhct.blogs.lincoln.ac.uk/

It is important that we have a good understanding of the health needs of people on probation, and the most effective ways of improving health outcomes for this group for several reasons. Firstly, as part of improving the health of this marginalised group, and thereby reducing health inequalities. Secondly, because improving health is a recognised pathway out of reoffending; and thirdly, because a focus on health may produce a wider 'community dividend' through things like reducing fear of crime, and reducing the use of crisis care (Home Office, 2004; National Probation Service, 2019; Revolving Doors Agency, 2017).

Consequently, we conducted a systematic review where we aimed to identify all papers across the world that concerned healthcare and probation. In particular, our first aim was to identify what the literature tells us about the most effective approaches to improving health outcomes for adults on probation. Our second aim was to identify what the literature tells us about the health needs of adults on probation, their patterns of service access, and any potential approaches to improving health outcomes that are *described* in the literature, but have not yet been subject to research or evaluation. In this paper we have extracted only those papers that directly relate to suicide and probation.

2. Methods

2.1. Search strategy

Databases searched were as follows: MEDLINE, PsycINFO, IBSS, CINAHL, The Cochrane Library, EMBASE, AMED, ASSIA, and HMIC.

The search was broad to encompass as many different areas of health and types of intervention or service as possible, and was restricted to papers published between January 2000 and May 2017. The search strategy for MEDLINE is shown in Appendix A, and was translated for the remaining databases.

We hand-searched the British Journal of Criminology, the Probation Journal, the Irish Probation Journal, and Health and Social Care in the Community from 2000 to September 2017, and the reference lists of included papers.

We also searched the grey literature, namely The King's Fund, National Offender Management Service, Public Health England, NHS England, NHS Commissioning Board, Department of Health, Offender Health Research Network, Prison Reform Trust, Centre for Mental Health, HMI Probation, Social Care Institute for Excellence, Turning Point, Addaction (a UK drug, alcohol and mental health charity), Mind, and Clinks websites.

2.2. Inclusion and exclusion criteria

In line with our first aim, to be included, studies had to present findings from *research on the effectiveness of an approach* to improving health outcomes (e.g. quality of life, improved access to services, positive patient experience, reduction in substance misuse, hospital admissions avoidance, increased self-management of health conditions) for adults in contact with probation (i.e. people on community sentences or post-release licenses). Papers that included people on parole were also included. There were no restrictions for language or study design.

In line with our second aim, we also identified papers that met the above criteria but were not research papers i.e. papers purely *describing* an approach to providing healthcare to the target population or illustrating aspects of health needs in this group. These were classified as 'background' papers.

2.3. Assessment of relevance for inclusion in the review

Titles and abstracts were independently assessed by CS and RM. Full papers were ordered where relevance was unclear. Areas of disagreement were resolved through discussion with a third reviewer (CB).

We assessed quality using:

- The EPHPP quality assessment tool for quantitative studies recommended by Cochrane
- The tool recommended by NICE in their Methods for the Development of NICE Public Health Guidance (third edition) (2012) for qualitative studies

Mixed or multi-method papers were assessed using both tools. We conducted data extraction on all papers identified as 'includes', and did not use the quality assessment to exclude papers from the review.

3. Results

A total of 5125 papers were identified in the initial electronic searches, reducing to 3316 after duplicates were removed. Of these, 51 were identified as appropriate for full-text review. Hand-searching identified an additional 8 papers, two of which we were unable to acquire, and two of which on closer inspection were not research papers.

After reading the full-texts of the remaining 55 papers, 25 were included in the review. An additional 20 papers were identified and included from their reference lists. Thus, the total number of includes was 45. Only one of these, however, concerned suicide. An additional 12 papers were classified as 'background' i.e. relevant descriptive or commentary papers on probation and suicide rather than research papers (Fig. 1).

3.1. Description of studies

There are a number of studies that did not meet the strict criteria for inclusion but that, nonetheless, provide important background material on probation and suicide in line with the second aim of the review. These were descriptive rather than research studies, and are described briefly below.

3.1.1. Background papers: suicide and probation

We identified a total of 12 papers that were classified as 'background' within the review and focussed on aspects of suicide or suicidal ideation amongst probationers (Cardarelli et al., 2015; Clark et al., 2013; Mackenzie, Cartwright, Beck, & Borrill, 2015; Sattar, 2003; Yu & Sung, 2015), recently released prisoners (Daigle & Naud, 2012; Jones & Maynard, 2013; Kariminia et al., 2007; Merrall et al., 2010; Pratt, Piper, Appleby, Webb, & Shaw, 2006) individuals on parole (Yu, Sung, Mellow, & Shlosberg, 2014), or people that had been on the criminal justice pathway in the 12 months before suicide (defined as "being arrested, charged, convicted or serving either a community-based sentence or licence") (King et al., 2015, p. 175).

The studies were published between 2003 and 2015 in England and Wales (King et al., 2015; Mackenzie et al., 2015; Pratt et al., 2006; Sattar, 2003), the USA (Cardarelli et al., 2015; Clark et al., 2013; Yu et al., 2014; Yu & Sung, 2015), Canada (Daigle & Naud, 2012), and Australia (Kariminia et al., 2007). In addition, two of the papers were literature reviews (Jones & Maynard, 2013; Merrall et al., 2010).

These background papers largely reported on the prevalence of suicide and/or suicidal ideation amongst the above groups, and possible predictors of this. The **studies of probationers** reported that rates of death by suicide amongst this population were much higher than in the general population. For example, Sattar (2003) studied death certificates for 1267 offenders serving community sentences or receiving post-custodial supervision by probation in England and Wales. Here, standardised mortality ratios (SMRs) calculated for males (which make

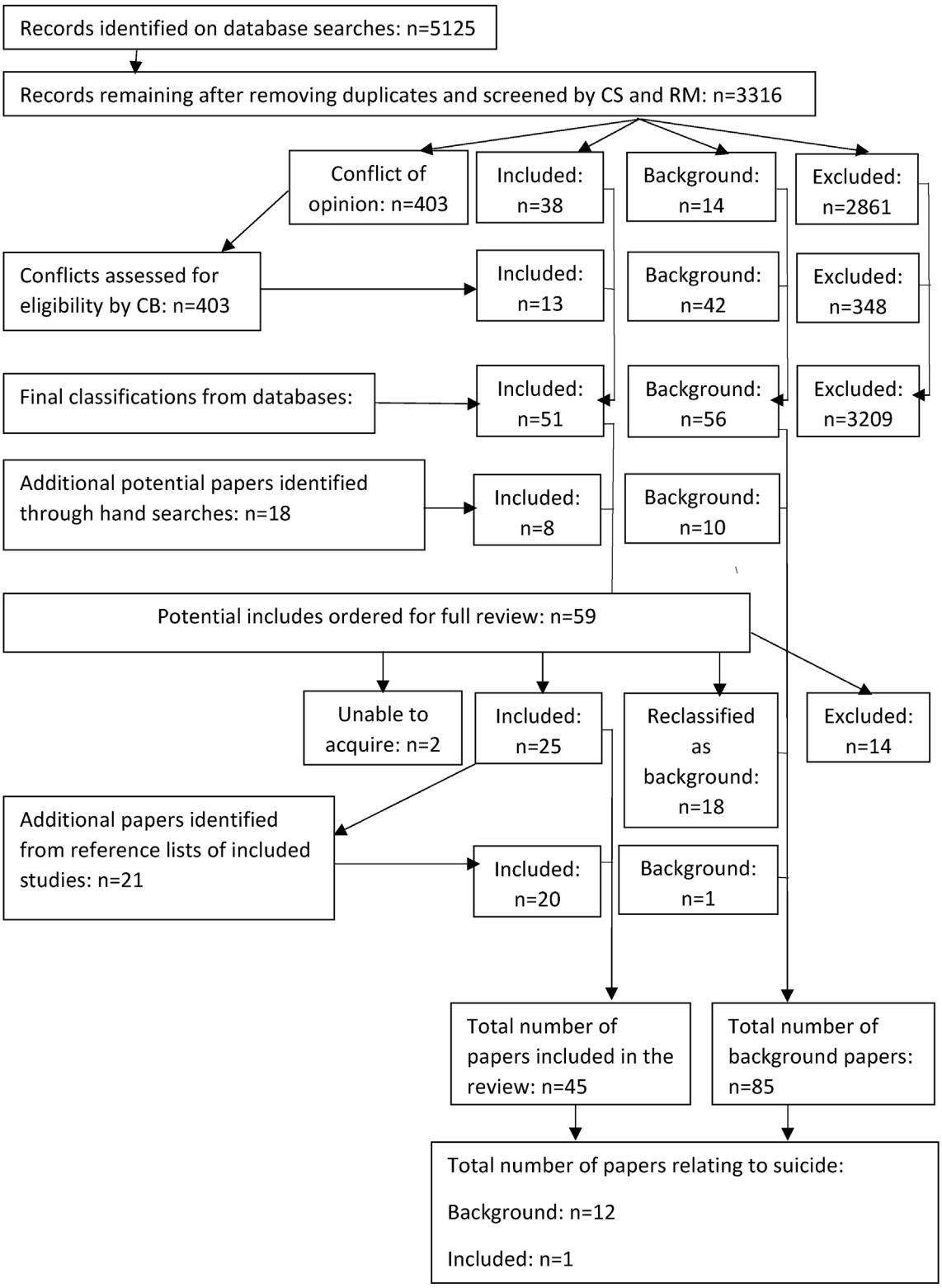

Fig. 1. PRISMA diagram.

the age distribution for offenders fit that of the general population) showed that offenders in the community had an SMR of 378, compared to an SMR of 100 for the general population. That is, offenders in the community were almost four times more likely to die than the general population (Sattar, 2003, p. 21). When looking specifically at suicide, they were "over 9 times more likely to die than the general population in 1996 [SMR of 977 versus 100], and in 1997 community offenders were 13 times more likely to die than the general population" (SMR of 1307 versus 100) (Sattar, 2003, p. 21).

Cardarelli et al. (2015) looked specifically at probationers that had undergone a substance use disorder assessment at Tarrant County Community Supervision and Correction Department's Treatment Alternative to Incarceration Program. Here, 13% of the sample were classified as at high risk of suicide on the basis that they answered positively to the

question "are you thinking about ending your life or committing suicide?" This study also considered predictors of suicide, noting that suicide and suicidal ideation amongst released prisoners has been linked to substance misuse and mental illness – those with ADHD "were 8.84 times more likely to indicate that they thought about ending their life or committing suicide" (Cardarelli et al., 2015, p. 148). "Probationers who screened positive for substance abuse disorder, anxiety disorder, or bipolar disorder were approximately twice more likely to be at high risk for suicide, and those who screened positive for depression were five times more likely to screen positive for suicide risk" (Cardarelli et al., 2015, p. 149).

Likewise, in a study of suicidal ideation amongst 4320 people aged 18+ years that had participated in the National Survey of Drug Use and Health 2009-2011 in the USA, Yu and Sung (2015) concluded that probationers had a higher prevalence rate of suicidal ideation than non-probationers, and that prevalence rates were higher in women than in men. Furthermore, whilst the odds of suicidal ideation were increased for both men and women if they experienced serious psychological distress, a major depressive episode or received inpatient mental health treatment; being Black doubled the odds of suicidal ideation for female probationers, and using illicit drugs increased suicidal ideation for male probationers. The authors state that "ensuring residential stability, offering anger management courses, or continued access to medical care for female probationers may lessen some of the stressors in their life" (Yu & Sung, 2015, p. 430), and that partnerships should be formed between probation and mental health professionals to provide assessment, crisis intervention services and training for probation staff. They also recommend introducing a case management system for those at risk of suicide.

Similarly, Clark et al. (2013) looked at the relationship between a history of attempting suicide, and future risk of mortality – comparing a history of suicide attempt with other known risk factors in a community corrections population in the USA. They concluded that "individuals reporting a history of suicide attempt (compared to those without a suicide history) demonstrated a shorter time to death while controlling for a number of other predictors" (Clark et al., 2013, p. 431), and past suicide attempt "was associated with the second-largest effect size in the model following male gender. Three other variables were found to be significantly associated with a shorter duration to mortality: older age, White race, and history of hospitalization for a physical condition" (Clark et al., 2013, p. 431).

Mackenzie et al. (2015) studied the experiences of 13 probation staff in one metropolitan area whose service users had attempted or completed suicide or had self-harmed, and how they managed these experiences. This paper emphasised the importance of probation staff receiving training around working with potentially vulnerable service users.

Similarly, in the studies of **recently released prisoners'** suicide rates were shown to be higher than amongst the general population. Moreover, suicides are more likely to occur within a relatively short period of release from prison – something that probation staff should be aware of and monitor.

For example, Pratt et al. (2006) linked the Home Office register with the database of the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness in England and Wales to identify all deaths by suicide or where an open verdict was received at the coroner's inquest between 2000 and 2002, within one year of an individual's release from prison. A total of 382 suicides were identified, a rate of 156 per 100,000 person years (Pratt et al., 2006, p. 119). Just over a fifth of these suicides occurred within 28 days of release, and 51% were within the first four months of release. Rates were higher amongst women than amongst men. The authors conclude that there is a need for multidisciplinary teams to complete a structured assessment of prisoners' risk of suicide at release, and develop and monitor care plans for individuals before and after their release from prison. The teams should ensure that individuals identified as being at risk of suicide have "regular and routine contact with a community mental-health professional from the moment the individual leaves prison and during the first few months after release, depending on the needs of the individual" (Pratt et al., 2006, p. 122).

Daigle and Naud, (2012) report similar findings. In a longitudinal study of 1025 penitentiary prisoners in Quebec aged 18+ that received sentences of over 24 months, which were served in the penitentiary and then under parole supervision, they found that 20% of suicides occurred within a month of release, and 40% within the first year of release. The mean annual ratio for suicides was 220.57 per 100,000 – a much higher rate than that found in the general population.

Kariminia et al. (2007) looked at death records for 85,203 adult offenders "who had spent some time in full-time custody in prisons in New South Wales between 1 January 1988 and 31 December 2002" (Kariminia et al., 2007, p. 387). Unlike many of the other studies, they reported a higher rate of suicide in men after release than in women (135 versus 82 per 100,000 person-years) (Kariminia et al., 2007, p. 387). Again, the suicide rate was higher within the first two weeks of release from prison.

In their meta-analysis, Merrall et al. (2010) searched specifically for literature on the relative risk of "drug-related death (i.e. overdose or accidental poisoning) in the first 2 weeks after release compared with week's 3-12 after release" (Merrall et al., 2010, p. 1546). Six studies were included in the review, and the authors conclude that the literature demonstrates "an internationally high, three-to-eightfold increased risk of drug-related death in the first 2 weeks after release from prison compared with the subsequent 10 weeks" (Merrall et al., 2010, p. 1549). There was also an elevated risk in weeks three and four.

Finally, Jones and Maynard (2013) conducted a systematic review of papers on suicide in recently released prisoners, including a total of nine studies, and conducting a meta-analysis on five of them. The meta-analysis "showed that the risk of suicide in released prisoners was 6.76 times that of the general population" (Jones & Maynard, 2013, p. 20).

In the study of **individuals on parole** Yu et al. (2014) used data from the National Survey on Drug Use and Health (2009-2011) to compare the prevalence and correlates of suicidal ideation among 1249 parolees and 114,033 non-parolees. They found that "over the three years, the average prevalence of suicidal ideation among parolees (8.6%) was more than twice that among non-parolees (3.7%)" (Yu et al., 2014, p. 381). This study also identified differences between parolees and non-parolees in terms of what increased or decreased suicidal ideation, stating that "characteristics associated with decreased suicidal ideation among non-parolees, such as being married, older, and employed, were not related to lower suicidal ideation among parolees" (Yu et al., 2014, p. 381), and "parolees who received a past-year prescription for a mood disorder did not have higher rates of suicidal ideation, although this variable was associated with higher suicidal ideation among non--parolees" (Yu et al., 2014, p. 381).

3.1.2. Included study

Just one paper met the criteria for inclusion in this review. This paper used probation records to identify cases of death by suicide or where "there was substantial evidence of previous suicide attempts and other risk factors, along with increased suicidal motivation or low mood" (Borrill, Cook, & Beck, 2017, p. 9) between 2010 and 2013 in one probation area in the UK. Probation records for each of the 28 included cases were examined from the start of an individual's sentence through to their death to look at service users' experiences in relation to the supervision process. Using content analysis, the researchers identified four key themes, and made recommendations about how suicide risk could be better managed in the future. We may wish to be cautious about generalising from this study, as it was only conducted in one probation area, and was based on a small number of cases that appeared to be at risk of suicide, but only 11 were confirmed as such. However, the study makes some important points in relation to the manner in which better health outcomes might be achieved for offenders. Key findings included that risk of suicide may be better managed through probation staff:

- Recognising that missing appointments may be a sign of increased suicide risk
- Reviewing suicide risk when instigating breach, legal proceedings or enforcement actions as the stress associated with this may increase an offender's suicide risk
- Ensuring that an offender has consistent relationships with staff (rather than being subject to changes in supervisor) if possible

In addition, the article states that probation staff should receive targeted suicide prevention training, and need to be made aware of the importance of using the Delius system to alert other people about an individual's suicide risk level.

4. Discussion

It is clear that probationers are a very high-risk group for completed suicide. Since the review was undertaken there has been yet more convincing evidence that this is the case. In their paper Philips, Padfield, and Gelsthorpe (2018) show that those serving probation orders in England, over a recent five-year period, have a higher suicide rate than that of prisoners and a rate that is nearly nine times higher than the general population (see Table 1).

As has been shown, the stressors associated with a high risk of suicide are varied and complex but include: drug overdose; mental health problems (especially a former psychiatric in-patient admission) and poor physical health. Indeed, Bertolote and Fleischmann (2002) estimated that 90% of all suicides had a diagnosable mental health disorder, most commonly depression, psychosis and substance misuse (depression combined with alcohol misuse is the most common diagnoses of all).

The key question that arises is what is the role for both the probation service and health services in this context? There is only one paper included in this review which suggest ways in which probation services themselves might better operate in order to reduce suicide rates (Borrill et al., 2017). The paper suggests that missed appointments are likely to be a key indicator of someone with suicidal intent. The authors state:

"Missed appointments may therefore provide an observable sign that an individual is experiencing significant difficulties in coping and meeting their responsibilities" (Borrill et al., 2017, p. 15).

Missing appointments, of course, leads to a legal process, in the first instance, the issuing of a formal warning. Formal breach proceedings might ensue whereby the probationer is retuned to court and possibly moved back to prison. The fear of legal proceedings combined with other life events such as the loss of accommodation, increased usage of drugs/alcohol, or problems with interpersonal relationships, might well increase suicide risk in those already highly vulnerable.

How might mental health services themselves better respond to suicide risk in probation clients? It seems simple to say but in the first instance there has to be a relationship between a mental health and probation service. We have described in an earlier paper (Brooker et al., 2020) some examples of where this has been reported which may provide useful learning. For example, Lamberti, Weisman, and Faden (2004) identified assertive community treatment programs that aimed to reduce re-offending amongst adults with severe mental illness that have been involved in the criminal justice system in 28 US states (Lamberti et al., 2004, p. 1286). Mitton, Simpson, Gardner, Barnes, and McDougall (2007) described outcomes from a programme that aimed to improve links between mental health and criminal justice services. They examined "outcomes and service utilization of clients using the Calgary Diversion Program, a community-based alternative to incarceration for persons with serious mental disorders who commit minor offences" (Mitton et al., 2007, p. 145) in Alberta, Canada. This programme diverted people away from the criminal justice system and into treatment. The authors recommend the following as ingredients for a successful programme: a client-centred approach, research and information sharing agreements being established between participating organisations, identified people to act as 'boundary spanners' for sharing knowledge, and having an on-site pharmacy (Mitton et al., 2007, p. 150).

Nadkarni, Chipchase, and Fraser (2000) described a partnership between probation and a forensic psychiatry service to identify mental health needs amongst Approved Premises residents, provide direct access to mental health support for residents, and increase staff knowledge around mental health. Here, the authors concluded that most Approved Premises would benefit from this type of partnership, although more research is needed due to the small number of cases that were seen within the study period.

Clayton, O'Connell, Bellamy, Benedict, and Rowe (2013) reported findings from a randomized controlled trial of a Citizenship Project that "was designed to address the specific community and social inclusion needs of persons with serious mental illness (SMI) and criminal justice histories" (Clayton et al., 2013, p. 115). Individuals with a serious mental illness being treated at one of two mental health centres who had a criminal charge within the last two years were randomized into the project (n = 73, 64%) or treatment as usual (n = 41, 36%). The intervention consisted of "three integrated components: individual peer mentor support, an 8-week citizenship class, and an 8-week valued role component" (Clayton et al., 2013, p. 116).

Skeem et al. (2006) provided an overview of specialty caseloads that have been developed for both probation and parole in the USA. Whilst there is a paucity of research in this area, a national survey found that specialty agencies or caseloads have the following common features: exclusively mental health caseloads with meaningfully reduced numbers of cases (on average around a third the size of a traditional caseload), ongoing officer training, integrated resources between probation and external treatment services, and the use of problem-solving strategies rather than threats of incarceration as responses to non-compliance. There has been little research into the effectiveness of these ways of working, but two studies suggested that "probationers with mental illness, probation officers, and probation supervisors perceive speciality caseloads as more effective than traditional caseloads" (Skeem & Eno Louden, 2006, p. 339), and "three additional studies – two randomized controlled trials and one uncontrolled cohort study –suggest that specialty agencies are more effective than traditional agencies in linking probationers with treatment services, improving their well-being, and reducing their risk of probation violation" (Skeem & Eno Louden, 2006, pp. 339-340).

Table 1
Suicide rate and rate ratio of people dying by suicide under supervision, in prison and in the general population.

Total number of suicides of offenders under supervision (2010/11–2015/16)	Annual suicide rate (offenders in community)/100,000		Annual suicide rate (prisoners)/100,000 (Fazel et al. 2017)		Annual suicide rate (general population)/100,000 aged 30–49 (ONS)	Rate ratios		
	Rate	95% CI	Rate	95% CI		Supervision/prison suicide rate ratio	Supervision/general population rate ratio	Prison/general population rate ratio (Fazel et al. 2017)
1619	118	99–137	83	66–100	13.6	1.42	8.67	6.1

Reproduced from Philips et al. (2018) with permission from Dr Jake Phillips.

We also identified examples of partnership working between mental health services and probation that interviewees considered to be working well in our wider study, such as the Offender Personality Disorder Pathway, and the provision of counselling services in one Community Rehabilitation Company, and of mental health support within probation Approved Premises (Sirdifield et al., 2019b). These examples of partnership working may provide a starting point from which to develop a model for probation that encompasses improved management and reduction of suicide risk.

We have argued elsewhere that the lack of training for probation officers in either mental illness or substance misuse means that mental health issues are often missed by offender managers. We strongly suspect that suicidal ideation is hard to identify without specific education in this aspect of mental health (Brooker et al., 2014; Denney et al., 2014). Indeed, we identified that offender managers only recognised 64% of cases with depression and 36% of those with psychotic disorders in a large community random sample of probationers formally identified with a mental health disorder (Brooker et al., 2011).

In England, the recent National Probation Service Health and Social Care Strategy 2019-2022 includes a commitment to raising awareness and understanding of suicide prevention and risk of suicide, and to develop the workforce to address these vulnerabilities. Intensely training a subset of probation staff in mental health seems to make perfect sense, not least of which would be to reduce the seriously high suicide rate amongst this group. However, it still requires a good relationship with a local mental health service/GP if clients are to pursue an appropriate pathway once suicidal ideation has been detected.

In England the lack of funding for healthcare in probation continues to be a serious issue. Our research has tracked funding for healthcare in probation over a number of years. Clinical Commissioning groups (CCGs) in England are responsible, in association with Public Health Departments, for assessing mental health care needs and then funding services that meet these needs. It is lamentable that in 2014 in England only 1% of CCGs invested funding into the healthcare of probationers and that by 2017 that figure had only increased to 5% (Sirdifield, Marples, Brooker, & Denney, 2019a). This coupled with drastic reductions in the budgets for Local Authority substance misuse services means that appropriate mental healthcare for probation clients is a very long way from being realised.

The background papers identified in this review demonstrate the increased risk of suicide in the probation population when compared to the general population, and identify risk factors which include drug overdose, mental health problems, and poor physical health. However, the review was only able to identify one published research study that suggests ways in which probation practice might be improved to reduce suicide rates.

There is a clear need for partnership working between probation and health services to improve the management and reduction of risk of suicide in the probation population. Whilst focused broadly on mental health rather than specifically focused on suicide risk, the wider literature does provide some examples of such partnership working which may provide a starting point for improvements to practice in this area.

The National Probation Service is committed to raising awareness and understanding of suicide prevention and risk of suicide. There is a clear need for training, investment, research and evaluation to support and provide an evidence base for this ambition.

Declaration of competing interest

The authors have no competing interests to declare.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.fsiml.2020.100012.

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