

# **Evaluating of the Impact of the London Pathway Project**

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## Abstract

**Background:** The London Pathway Project (LPP) is a whole-systems approach to addressing the needs of offenders who have severe personality disorder, with the goal of reducing their risk of harm.

**Aims:** This paper evaluated the impact of the LPP on change in criminogenic needs over time, and its impact on the risk of reoffending and harm compared to a similar group who did not experience the pathway.

**Method:** Data for males who had been identified for the LPP were used to explore changes in criminogenic needs an average of 11 months after commencing on the pathway. Also, Offender Assessment System data was used to match males who had experienced the LPP for at least 12 months to a comparison group on key demographic and criminal history variables. Changes in validated risk assessment devices and changes in practitioner's perception of risk were examined.

**Results:** The LPP was associated with desirable within-individual change for most of the criminogenic needs explored. However, non-desirable changes in lifestyle and associates were also identified, but this was particularly the case for those sentenced to prison. When compared to a matched group, those identified for the pathway showed a significant reduction on an objective measure of risk of reoffending, but were rated as having significantly increased in risk of harm based on practitioner's perceptions. There was no evidence that greater progression along the pathway was associated with greater benefits.

**Conclusions:** The results were generally positive in terms of its relation to criminogenic needs and risks. Much more research which clearly links project inputs to actual behavioural outcomes, such as later reoffending, is needed.

**Implications:** This initial evaluation of the impact of the LPP could be used as baseline data to examine the impact of the pathway over time, and with greater precision (e.g., matching on personality features).

## Background

Offenders with personality disorders are disproportionately involved in serious and violent offending (Coid et al., 2007), and pose complex challenges to those tasked with managing and reducing their risks. These challenges include, but are not limited to, identifying those with personality disorder (PD), assessing the type and symptomatology of their personality disorder and understanding how this might link to their offending, and selecting interventions and/or offending behaviour programmes that might reduce the risk of their offending (e.g. Minoudis et al., 2012a). An intermediate goal of treating offenders with personality disorders is to ameliorate the impact of the PD on their day to day life to improve their wellbeing. Linked to this, the ultimate goal is to reduce the individuals' risk of harm to themselves and others, and to reduce their risk of reoffending (Craissati et al., 2010). These challenges are multiplied when attempting to address the needs of all potential personality disordered offenders in England and Wales (see Minoudis & Kane, 2017 and Skett, Goode & Barton, 2017, this volume).

Prevalence estimates from the Department of Health and the National Offender Management Service (NOMS), the bodies responsible for offenders with personality disorder in England and Wales, suggested that approximately 50% of offenders managed by NOMS could be identified as personality disordered (117,000 of 234,140 men and 12,000 of 24,577 women), and of these PD offenders 3 to 4% would be assessed as high or very high risk of causing serious harm to others (Joseph & Benefield, 2012; Skett, Goode, Barton, 2017).

Unfortunately, the evidence base for the effective treatment of personality disorders is insufficient (e.g. Bateman et al., 2015), and this is even more so the case amongst offenders with personality disorders (e.g. Khalifa et al., 2010; Livesley, 2007). The London Pathways Partnership (LPP) is consortium of four NHS Trusts delivering the Community Pathways service across London in collaboration with the National Probation Service: London Division. Although called the Community Pathways service, this service provides for both those offenders serving sentences in the community and in prison. For a more comprehensive review of the background and development of the LPP and

the governments overarching Offender Personality Disorder (OPD) strategy see Minoudis et al., 2017 and Skett, Goode & Barton, 2017, both in this issue.

One of the higher level aims of the OPD strategy is to reduce reoffending, in particular repeat serious sexual and/or violent offending, and one of the key methods of attaining this was to attempt to improve offenders' access to, and progression through services, and ensure effective risk management. These aims are proposed to be achieved through earlier post-sentence identification of offenders with severe PDs, improving sentence planning for these offenders (through assessment and case formulation), improving access to interventions and treatment services. Treatment gains made by such offenders were to be new progression environments in prisons and approved premises, where offenders can be provided with post-treatment support in their move towards safer management in the community. This is a whole systems approach where the PD offender is identified early on post-sentence and an Offender Manager (OM) constructs a Pathway plan, supported by health service staff (usually psychologists), tracing the offender's journey through services. The Pathway is broader than a treatment model, as the core idea is to assist the offender to make positive life choices that will reduce risk and improve health and wellbeing (see Minoudis & Kane, 2017 and Skett, Goode & Barton, 2017, this volume).

Previous research has examined the efficacy of various components of the pathway, such as the identification of those with severe PD (Minoudis et al., 2012a; Shaw et al., 2012), and case consultation (Minoudis et al., 2012b). There has also been an evaluation of the LPP pilot programme, two years after implementation in four areas of London (Minoudis et al., 2012a). In this study all probation cases were screened for high risk of harm and personality disorder. A total of 742 offenders were identified, but the research focussed on the 341 who had received more intensive input. A total of 68% had a sexual or violent index offence and 87% were of high or very high risk of harm. After they were identified the sample of PD offenders was provided with various levels of support, ranging from providing probation officers with strategies to engage with these offenders, to

recommending specific custodial or community pathways. At least in part because of practical limitations (i.e., availability of places), of the 341 offenders less than half (46%) were moved into specific services in secure settings or the community over the two year period. There was evidence to suggest that offenders who were contacted by telephone by psychologists were more likely to enter services, but the causal mechanism for this relationship was unclear.

This paper extends the previous work by examining the impact of the full LPP Community Pathways service implementation after it had been in operation for at least two years across London. It is important to note that this was not an examination of the impact of a specific intervention with a clearly defined sample, but instead an evaluation of the impact of an overall approach with a heterogeneous population of high-risk, potentially high-harm men. Practical constraints were also placed on this evaluation, for example, because of the different starting points of the population (e.g., some commencing long prison sentences, some in the community), and because of the data available was administrative and not specifically collected for evaluative purposes.

The key metrics of impact available for this evaluation were available in OASys and included changes in criminogenic needs (such as alcohol use or criminal thinking; Moore, 2015), risk of reoffending measures (Offender General Predictor (OGP), Offender Violence Predictor, (OVP; Howard, 2009) and risk of harm (a perceptual measure of the potential harm of a reoffence; Morton, 2009). When conducting such evaluations, the presence of a control or comparison group, similar on key features to the group receiving treatment (in this case those identified for the pathway), is essential. A comparison group allows for an assessment of the counterfactual, by providing a view of what might have happened had the pathway not been in operation.

#### Research Questions:

1. Were there desirable changes in the criminogenic needs of those identified for the pathway from their first Offender Assessment System (OASys) assessment after identification for the Community Pathways service to their most recent assessment?

2. Were there desirable changes in the risk of reoffending and/or risk or harm for those identified for the pathway from their first OASys assessment after identification for the service to their most recent assessment? Were these changes different from those of a matched group of offenders over a similar period of time?

## Method

### Sample

The sample of PD offenders was drawn from the records from all London Delivery Unit's (LDU, n=24) probation caseloads, initially based on retrospective screening conducted by psychologists or specialist probation officers, but then prospectively by individual offender managers as offenders were convicted and assessed as part of the routine criminal justice process. Up to March 2016 an estimated 97,380 offenders (both males and females) were eligible to have been screened (Skett, Goode & Barton, 2017).

To screen such a large number of offenders, an algorithm was developed. This included an assessment of 'risk', based on the sentence type the individual received (e.g., life sentence), their index offence (i.e., violent or sexual), their risk of harm (RoH)<sup>1</sup> rating being high or very high from OASys, or a RoH of medium with previous violent or sexual offences. Personality disorder was assessed based on endorsing 7 or more of 10 indicator items in OASys. These included items such as: 'Did any of the offences involve excessive violence/sadism?', and 'Reckless/risk taking behaviour'. An offender could also meet the personality disorder criteria by being assessed as having two out of: 'childhood difficulties', 'history of mental health problems', 'self-harm/suicide attempts', 'challenging behaviour'. For a full examination of the benefits and limitations of this method, and alternative screening methods see Minoudis et al (2012a).

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<sup>1</sup> Risk of harm is covered in the OASys assessment manual and includes the risks posed by the individual to others and to themselves (e.g., self-harm). High risk of harm is defined as 'identifiable indicators of risk of serious harm. The potential event could happen at any time and the impact would be serious. Very high risk of harm is 'an imminent risk of serious harm. The potential event is more likely than not to happen imminently and the impact would be serious' (OASys, 2006).

The date of implementation of the LPP Community Pathways service varied with some areas commencing as early as 2009 (e.g., Lambeth) and other areas not starting until 2014 (e.g., Merton). All LDUs had a specially trained personality disorder probation officer (PDPO), who was to dedicate 50% of their working week to implementing the service (e.g., retrospective screening of the caseload), and the additional support of specialist psychologists<sup>2</sup>.

All Information analysed for this paper came from two sources, the LPP dataset and OASys. The LPP dataset was a centralised record of individuals identified for the pathway and their progress, maintained by project staff. This contained information about 6,080 offenders (94% males) who had been screened onto the pathway. Because the LPP was populated almost exclusively by males, and because of the well-established gender differences in interventions approaches to address offending (e.g., Jolliffe et al., 2011), this study included only males. OASys is the standard computerised offender assessment tool that is administered by offender managers to all offenders under probation supervision<sup>3</sup> (Moore, 2015).

## Measures

### 1. Criminogenic Needs

Criminogenic needs were assessed by offender managers using the standard approach in OASys (e.g., Morton, 2009). Previous research has identified ten criminogenic needs which were significantly associated with later reoffending in England (Moore, 2015), of which seven were available for the current study. These were accommodation needs, alcohol misuse, antisocial attitudes, drug misuse, lifestyle and associates, relationship needs, and

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<sup>2</sup> Psychologists provided various levels of support depending on the degree of implementation of the pathway. For example, psychologists were more active at the early stages of implementation of the pathway.

<sup>3</sup> This would include offenders serving sentences both in the community and in prison.

thinking and behaviour. Research on the assessment of criminogenic needs in OASys has suggested that it is not without its flaws, particularly with regard to inter-rater reliability (Morton, 2009). As a way to mitigate this risk, only offenders who were rated above the recognised cut-off point, both suggesting extreme need and also found to be associated with a greater likelihood of reoffending, were included in this analysis (NOMS, 2013). For example, a raw score of 2 on accommodation indicates no suitable accommodation and in the alcohol misuse section, a raw score of 4 indicates binge drinking and excessive use of alcohol. A total of 3,478 male offenders met this criteria, with an average age of 32.8 (sd=11.1). The main ethnicities represented were of White (40.5%) and Black (37.1%) and Mixed offenders. Out of the possible 10 PD indicators used for screening, the average for these men was 7.2 (sd=1.6), and the average of the additional four additional items was 1.7 (sd=1.2).

## 2. OVP and OGP

Dynamic risk assessment devices were also available. Features assessed within OASys have been combined into risk assessment tools to aid in the prediction of reoffending. The Violence Predictor (OVP) estimates an offender's likelihood of violent reoffending, and the General Predictor (OGP) estimates the likelihood of reoffending for non-sexual, non-violent offences (Howard, 2009). OGP and OVP are measured on a continuous scale but there are agreed cut-off points for low, medium, high and very high risk. These categories were used instead of the change in the continuous measure to provide a more meaningful assessment of change.<sup>4</sup>

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<sup>4</sup> Arguably, a change in OGP or OVP risk category is more practically useful for practitioners than identifying a numerical change.

Both of these risk assessment devices include dynamic items, meaning that offender's scores can change over time when they are reassessed in OASys. Although clearly limited as measures of behavioural change (e.g., Ward & Fortune, 2016), changes in OVP and OGP scores can take place whether an offender is in prison or in the community, whereas only those in the community are 'at risk' of a reoffence.

### 3. Risk of Harm

Changes in the clinical assessment of risk of harm, or the perceived seriousness of any reoffence, were also assessed. Risk of harm is assessed by the offender manager and can be low, medium, high or very high.

### 4. Pathway input

Theoretically, the pathway approach should operate in a progressive fashion from identification thorough to completing appropriate services (see Jolliffe et al., 2017, this volume for a description of pathway operation). It was considered important to examine the impact that greater input on the pathway (e.g., received a case formulation or had services recommended) might have. It might be hypothesised that greater input would lead to greater identifiable benefits. Alternatively, greater movement on the pathway could be the result of conscious focussing on more problematic individuals, so greater input may, in fact, result in more limited benefits. Chance factors may also influence pathway progression (e.g., availability of service to recommend an individual to attend).

## Procedure

Data was extracted from the LPP dataset and matched with information about the offenders that was held on OASys. In order to examine potential within-individual change in criminogenic needs (Research Question 1) an offender needed to have at least two OASys

assessments, one prior to the offender being identified for the pathway, and another after experiencing the pathway for at least 6 months. Of the X number of individuals Y were serving their sentences in prison and Z were in the community. In order to isolate the impact of location (i.e., prison or community) on criminogenic needs, only those offenders who remained in the same location across both OASys assessments were included.

To address Research Question 2 a quasi-experimental matching approach was employed to create a comparison group. This involved matching individuals identified for the pathway, one-to-one, with historical OASys data from offenders from London who would have been eligible for the pathway had it been in operation at the time their data were collected. One individual from the pathway group was matched to one individual from the 'historical' comparison group<sup>5</sup>. One-to-one matching has its benefits and limitations namely that it decreases potential bias, but increases variance (Apel & Sweeten, 2010).

In order to be eligible to be matched, the pathway group needed to have a minimum of two OASys assessments that were at least 30 days apart, and also to have the OVP, OGP and RoH measures completed for both OASys assessments. The pathway and comparison group were matched on age at first assessment, time between assessments, initial risk of harm rating, OGP level (low, medium, high, very high), OVP level, and sentence type (community sentence or custodial sentence). The matching process resulted in 1,046 offenders identified for the pathway matched to 1,046 offenders in the comparison group. The average age of these individuals was 30.6 (sd=9.7), with over 70% being in custody for both assessments.

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<sup>5</sup> The historical comparison group was selected from all OASys assessments conducted in London from 2010-2013, but who did not subsequently end up on the pathway.

While far from a perfect in terms of missing information and possible errors, this data reflects a realistic view of what is available under normal operational conditions. The approach of this study, therefore, represents an evaluation of the impact of the day to day operation of the LPP rather than a research ideal (e.g., Howard & Dixon, 2013).

## Ethics

Ethical approval for this study was granted by the London – South East Research Ethics Committee (Ref: 14/LO/0518). Individuals consent for the use of their data was not obtained. However, once data linkage was completed individual identifiers were removed from the data.

## Results

### Impact of the LPP on Changes in Criminogenic Needs

Table 1 about here

Table 1 shows the cut-off scores (indicating a need for intervention) for each criminogenic need, along with the mean score on these at the first assessment after identification for the pathway and after an average of 11 months on the pathway. For example, 1942 individuals who had been identified for the pathway had an accommodation need with an average of 5.7. When this was assessed at the subsequent OASys assessment, the average of these needs was 3.9, a statistically significant reduction in accommodation need ( $t=18.1$ ,  $p<.0001$ ). The effect size of this comparison was  $d=.60$ , which is a large effect size in the social sciences (Farrington & Loeber, 1989).

The pathway was associated with a significant improvement in the criminogenic needs of accommodation, alcohol misuse, attitudes and thinking and behaviour, with effect sizes stronger for the former than the latter. However, the strongest effect size identified was for lifestyle and associate needs in a non-desirable direction. In order to explore this result and to further probe the potential impact of the pathway the sample was separated based on the sentence the individual received (community or custodial).

Table 2 here

The change in criminogenic needs for those identified for the pathway who received a community sentence can be seen in Table 2, while Table 3 shows the needs for those who received a custodial sentence<sup>6</sup>. The tables show that the changes in the effect sizes for the criminogenic needs were similar in direction regardless of the sentence type, but, of the four needs that had changed in a desirable direction, three had stronger effect sizes amongst those with community sentences. Only the alcohol misuse need appeared to improve more amongst those with a custodial sentence. Similarly, although the lifestyle and associate needs changed in a non-desirable direction for both those with a community and custodial sentence, this negative effect was much greater for those with a custodial sentence.

Table 3 here

### [Impact of the Pathway on Risk of General Reoffending](#)

Table 4 about here

Table 4 shows the number of individuals who were in each OGP band (Low, Medium, High and Very High) for both the pathway and comparison groups. For example, there were 235 individuals in the pathway group who, initially, were of Low OGP risk, matched with 235 in the comparison group who were also of Low risk. By the second assessment, a total of 14.0% (33/235) of those in the comparison group had shifted OGP bands compared to 11.1% (26/235) of those identified for the pathway. This difference was not statistically significant (chi squared = 0.95, n.s.;  $d = -.12$ <sup>7</sup>).

For individuals in the Low category, change, when it occurs, can only occur in a non-desirable direction, as one could only increase in risk from the lowest possible category. Conversely, amongst those in the Very High risk category, change, when it occurs, can only be desirable, as one can only reduce in risk.

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<sup>6</sup> The numbers in the sample do not add up because of missing data.

<sup>7</sup> The negative value of  $d$  reflects the fact that those identified for the pathway were less likely to change than the comparison group.

Of the 24 individuals identified for the pathway who were, initially, of Very High Risk 58.3% had decreased in risk by their next assessment compared to just over 29% in the comparison group. This difference was statistically significant (chi squared = 4.1,  $p < .05$ ;  $d = 0.68$ ) suggesting the pathway was associated with a reduction in risk, but, the number in this analysis was relatively small.

Unlike those who were initially of the lowest or highest categories of OGP risk, those who were initially of medium or high risk, could have a desirable change (i.e., reduction in risk) or a non-desirable change (i.e., increase in risk) by the second assessment. When the direction of change for those initially of medium or high risk was explored the results suggested that the pathway was not significantly associated with a desirable change amongst those of medium risk (chi squared = 0.8,  $d = .14$ ), but was amongst those of high risk. A total of 67% of those in the comparison group of high risk who had changed, reduced in risk compared to 87% of those on the pathway of high risk (chi squared = 9.9,  $p < .05$ ,  $d = .66$ ).

When the above analytic procedure was followed for using OVP levels instead of OGP levels no significant findings were identified, suggesting that the pathway was not associated with changes in OVP risk.

### Impact of the Pathway on Risk of Harm

As part of the OASys assessment, offender managers rate their perceptions of an individual's potential risk of harm when in the community, and this was one of the criterion on which the pathway and comparison group was matched. Of the 1,046 individuals on the pathway 688 (66%) were initially classified as being of medium risk of harm and 358 were classified as being of high risk (34%).

Of the 688 who were of medium risk of harm on the pathway, 21% had changed by the second assessment, compared to only 11% of those in the comparison group (chi squared = 22.1,  $p < .0001$ ;  $d = .38$ ). This indicates that those on the pathway were significantly more likely to have been perceived to have changed in risk of harm. In addition, those on the pathway of medium risk

who changed were significantly more likely to have been perceived as having increased in risk. Over 93% of the medium risk pathway group were perceived to have increased compared to 85% of the comparison group (chi squared = 3.9,  $p < .05$ ;  $d = .55$ ).

About an equal number of those on the pathway (27%) and comparison group (28%) who were initially perceived to be of high risk of harm had changed by the second assessment (chi squared = .23, n.s.;  $d = 0$ ).

### Impact of Case Formulation, Services Recommended

The quasi-experimental matching approach was also undertaken to evaluate the impact of greater pathway input on measures of risk of reoffending and risk of harm. The first pathway group that was matched to a comparison group was those who were identified for the pathway who had a case formulation ( $N = 178$ ), so some evidence that offender managers had considered the offender's behaviour and formulated potential approaches to address this (Hart et al., 2011). The second pathway group that was matched to a comparison group was those who had actually been recommended for services ( $n = 308$ )<sup>8</sup>, so evidence of a step further than case formulation. Each of the above pathway groups was matched with a separate historical comparison group using one-to-one matching based on the same variables described previously.

When the changes in OGP, OVP and risk of harm were explored for those with case consultations compared to the matched comparison group no differences were found. There were also no differences identified in the proportion that changed in OGP and OVP risk when those with service recommendations were compared to the matched comparison group. However, those who had service recommendations were found to have been significantly more likely to have been viewed as having increased in their perceived risk of harm when compared to those in the historical comparison group (chi squared = 8.3,  $p < .01$ ;  $d = .48$ ).

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<sup>8</sup> The fact that more individuals were recommended for services than had a case consultation could suggest that the pathway was not operating as intended (case consultation should inform the recommendation for services) or that information about completed case consultations was not being recorded (Jolliffe et al., 2017).

## Discussion

This research investigated the impact of a Community Pathways consultation service on various measures of risk, including criminogenic needs, predictive measures of general and violent offending and a subjective measure of risk of harm. There was desirable within individual change in criminogenic needs of accommodation, alcohol, attitude and thinking and behaviour, with most of these factors improving more amongst those in the community than in prison. These findings reflect positively on the service as higher criminogenic needs scores is indicative of higher levels of personality disturbance (citation, new Pways spec), and improvement in criminogenic needs is associated with reduced offending (de Vries Robbé, de Vogel and de Spa, 2011). This suggests the Community Pathways service is targeting those with more serious personality disorder and provides indirect evidence that it might be reducing the risks posed by this group to those in the community. The service appears to be meeting the OPD Strategy aims to reduce risk of reoffending and return offenders safely to the community (DH, 2010). Alcohol use reduced more amongst those in prison, possibly because there was less availability in custody compared to the community. Contrariwise, there was significant and strong non-desirable change in lifestyle and associates, mostly accounted for by offenders in prison. This may be due to reduced opportunity to maintain a positive support network in custody coupled with an increase in the potential to be influenced by criminal associates in prison (e.g., Jolliffe & Hedderman, 2015).

There was a significant and desirable impact on those of high and very high risk of general reoffending, who were more likely to reduce in risk compared to the comparison group. Given the context of evaluating the service at such an early stage of implementation, a reduction in risk of general reoffending in addition to an improvement in criminogenic needs increases confidence that the Pathway was improving public protection, one of the higher level objectives of the strategy (NOMS and NHS England, 2015). The ultimate aim of the Pathway is to reduce serious harm to the public, however there was no evidence of an impact on the risk of violent reoffending. This finding may be a

consequence of evaluating the service before it has had a chance to impact on factors more resistant to change or it may indicate the extent of the Pathways influence on risk – that it is limited to general rather than serious harm offending. Either way systematic reviews of interventions to reduce violence generally show that these have a greater impact on reducing general rather than violent reoffending (e.g., Jolliffe and Farrington, 2007). It will be important to re-evaluate the relative impact on general and violent risk of reoffending after the Pathway service has had longer to become embedded to determine whether this finding remains consistent.

There was no evidence of greater inputs in the pathway (e.g., case consultation or service recommendations) being associated with greater impacts. This was an unexpected finding given these activities comprise some of the main elements of the Community Pathways service. This may be a consequence of a consultation service having an indirect relationship with risk, where it is really the intervention services that the Community Pathways services refer to which directly impact on risk. Prior to implementation, commissioners estimated half the offenders identified would be likely to access treatment services (Joseph and Benefield, 2012). It would therefore be important to explore the impact of the Pathway service on those who actually received services, however due to data limitations this analysis could not be completed. It was also not possible to investigate whether referrals to Pathways interventions would have happened without a Community Pathways service making the recommendations. This would be an important area of future inquiry as it is unclear whether a consultation service is an economical and necessary means of improving access to personality disorder services.

Another key finding suggested the Pathway was associated with a significant increase in risk of harm; a subjective assessment based on structured professional judgement. This is a paradoxical finding which may appear negative when taken at face value. However, raising awareness of risk is an objective of the Pathway (NOMS and NHS England, 2015) and clinical opinion of risk of harm is likely to be susceptible to this awareness raising. As the practitioner learns more about indicators of

personality disorder and risk, it is reasonable to assume this may increase their perception of the risks posed by this individual. Additionally, entry to the Pathway is based on high or very high risk of harm and medium risk offenders may be escalated a risk level to become eligible for the service. This may have contributed to the increase in risk of harm for Pathway offenders. Both interpretations have ethical implications, including informing offenders they have been screened into the Pathway, and when there was a change in their risk. To date, offenders were not systematically informed, and there was no guidance to stipulate this as a requirement in the service specification, although this has been debated more recently and is likely to form part of a revised specification (Community Pathways Specification, unpublished document).

### Limitations

As with all research there were limitations to this study which affect the confidence with which conclusions can be drawn. Importantly, it was not possible to match the comparison group on the same personality disorder variables which were used to screen offenders into the service. The comparison group therefore may not match the Pathway offenders on important personality disorder features. However, given the screening process, the pathway group is much more likely to comprise those with more severe PD. In this way these differences between the pathway and comparison group might actually be masking greater benefits. In the future, the progress of this initial cohort could be matched with subsequent cohorts screened on to the pathway. This would allow matching on demographic, criminal history, and the personality disorder characteristics that resulted in screening.

Because of limitations related to data recording (see Jolliffe et al., 2017, this volume) this study was not able to explore whether progressing towards interventions or completing interventions was more likely to reduce risk. This should be a key element of future evaluative research on the LPP.

The impact of the pathway was only compared to change in risk (i.e. risk assessment tools), rather than key behavioural outcome of interest, namely serious reoffending. It is important to consider the limitations of such dynamic risk assessment devices (e.g., Ward and Fortune, 2016),

particularly their ability to identify causal mechanisms related to offending. That said, the nature of the pathway and the diversity of the personality disorders, approaches and interventions means that we were not in a position to explore potential causal mechanisms, only average global change.

Change was measured across a comparatively short time period, reducing the potential for actual change to take place. Most interventions for personality disorder are greater than 12 months and, therefore, to maximise chances of measuring change the time points for data comparison should allow well over a year for the referral and intervention to have completed. The research took place during the implementation of the service across London. Probation Local Delivery Units had been established for different lengths of time and all areas were prioritising case identification for the first year of the study. This reduced the likelihood of the pathway having an impact, as in many cases the service was not yet operational. Whilst this was not ideal research conditions, this study provides a picture of the effectiveness of a widely implemented consultation service. Research has established that interventions implemented on wider scales tend to have lower effects than highly structured pilot programmes (e.g., Howard and Dixon, 2013).

## Conclusion

There was evidence that the Community Pathways service was associated with desirable changes in measures criminogenic needs and risk of reoffending. Furthermore, the Strategy aim of increasing awareness of risk in practitioners was also supported (NOMS and NHS England, 2015). Given the length of time these services have been operational, this is a positive indication that the Pathway was beginning to meet the higher level strategy objective of reducing harm to the public. These findings were tempered by the absence of evidence of reduction in risk of violent reoffending and behavioural outcomes of reoffending. Public protection is ultimately improved by a reduction in serious harm offending and the Pathway will not be considered a success until this objective is achieved. Nevertheless, outcome studies of the Strategy's predecessor, the Dangerous and Severe Personality Disorder programme (Home Office and DH, 1999), provided negligible evidence of an impact on risk

compared to a control group over the course of 10 years (Vollm and Konappa, 2012). This research shows the Pathway is beginning to achieve its aims, but longer term follow-up is required to determine whether the risk of serious harm can be impacted by a consultation service.

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## Tables

Table 1. Changes in Criminogenic Needs

Criminogenic Needs	Cutoff	Time 1			Time 2			t	d
		N	Mean	sd	N	Mean	sd		
Accommodation	2+	1942	5.71	2.59	1942	3.92	3.30	18.8	<b>0.60***</b>
Alcohol	4+	746	5.58	1.34	746	4.59	2.13	10.7	<b>0.56***</b>
Attitude	2+	2435	3.44	1.25	2435	3.12	1.55	7.9	<b>0.23***</b>
Drug Misuse	2+	443	2.10	0.49	443	2.09	1.41	0.14	0
Lifestyle	2+	1350	2.07	0.47	1350	2.95	1.10	27.1	<b>-1.04***</b>
Relationships	2+	2597	3.66	1.27	2597	3.59	1.41	1.87	0.05
Thinking and Behaviour	4+	2785	5.69	1.47	2785	5.18	1.93	11.1	<b>0.30***</b>

\*=p<.05, \*\*=p<.001, \*\*\*=p<.0001

Table 2. Changes in Criminogenic Needs for Those with a Community Sentence

Criminogenic Needs	Cutoff	Time 1			Time 2			t	d
		N	Mean	sd	N	Mean	sd		
Accommodation	2+	249	4.83	2.55	249	3.18	3.03	6.57	<b>0.59***</b>
Alcohol	4+	167	5.78	1.33	167	5.01	2.21	3.9	<b>0.42**</b>
Attitude	2+	312	3.16	1.11	312	2.79	1.42	3.63	<b>0.29**</b>
Drug Misuse	2+	99	2.17	0.55	99	2.00	1.48	1.1	0.15
Lifestyle	2+	149	2.17	0.73	149	2.48	1.27	2.58	<b>-0.30*</b>
Relationships	2+	388	3.74	1.22	388	3.65	1.47	0.93	0.07
Thinking and Behaviour	4+	404	5.45	1.41	404	4.81	1.96	5.3	<b>0.37**</b>

\*=p<.05, \*\*=p<.001, \*\*\*=p<.0001

Table 3. Changes in Criminogenic Needs for Those with a Custodial Sentence

Criminogenic Needs	Cutoff	Time 1			Time 2			t	d
		N	Mean	sd	N	Mean	sd		
Accommodation	2+	1651	5.24	2.91	1651	3.66	3.30	16.1	<b>0.51***</b>
Alcohol	4+	541	5.49	1.35	541	4.47	2.07	9.6	<b>0.58***</b>
Attitude	2+	2014	3.48	1.26	2014	3.16	1.55	7.2	<b>0.23**</b>
Drug Misuse	2+	309	2.05	0.34	309	2.10	1.37	0.62	-0.05
Lifestyle	2+	1133	2.05	0.36	1133	3.03	1.04	30	<b>-1.26***</b>
Relationships	2+	2089	3.64	1.27	2089	3.58	1.38	1.46	0.05
Thinking and Behaviour	4+	2262	5.72	1.47	2262	5.24	1.89	9.5	<b>0.28***</b>

\*=p<.05, \*\*=p<.001, \*\*\*=p<.0001

Table 4.

<b>OGP</b>	<b>N</b>	<b>Comparison % change</b>	<b>Pathway % change</b>	<b>Chi Squared</b>	<b>d</b>
Low	235	14.0	11.1	1.0	-0.12
Medium	523	18.2	21.0	1.4	0.19
High	264	30.0	35.2	1.7	0.14
Very High	24	29.2	58.3	4.1	0.68*