# Gambling Treatment Services Needs Assessment Report

For

Gamble Aware

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**Glossary**

ABSG: Advisory Board for Safer Gambling
BACP: British Association of Counselling and Psychotherapy
BAME: Black And Minority Ethnic
BKM: BetKnowMore
CBT: Cognitive Behavioural Therapy
CEST: Client Evaluation of Self and Treatment
CMHT: Community Mental Health Teams
CNWL PGC: Central North West London Problem Gambling Clinic
Core-10: Clinical Outcomes in Routine Evaluation
DRF: Data Reporting Framework
DSM-IV: Diagnostic and Statistical Manual of the American Psychiatric Association (4th Edition)
GA: Gamblers Anonymous
GC: GamCare
GM: Gordon Moody residential treatment service
GNWHA: Gambling North-West Harms Alliance
GRH: Gambling Related Harms
KPI: Key Performance Indicator
NatCen: National Center for Social Research
NGTS: National Gambling Treatment System
NHS: National Health System
ORC: Organisational Readiness for Change
PG: Problem Gambling
PGSI: Problem Gambling Severity Index
SMART: Self-Management and Recovery Training is a mutual aid group that provides support for people with gambling problems
SOF: Survey of Organisational Functioning
TCU IBR: Texas Christian University Institute of Behavioral Research
WP: Work Package

# Funding Statement

GambleAware is a wholly independent charity and has a framework agreement with the Gambling Commission to deliver the National Strategy to Reduce Gambling Harms within the context of arrangements based on voluntary donations from the gambling industry. GambleAware commissions research and evaluation to build knowledge of what works in prevention and reduction of gambling harms that is independent of industry, government and the regulator.

The authors alone are responsible for the views expressed in this article, which do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated.

# Executive Summary

## Background/rationale

As part of a broader programme around gaps and needs for adults at risk, or currently experiencing, gambling related harm, ACT Recovery was commissioned to examine at risk and in treatment populations to address:

- 1. What are individual needs (users and affected others), and how well are they met?
- 2. How well do services measure, monitor, and meet the needs of those seeking help?
- 3. How consistently and effectively are gambling treatment needs met across the system of provision in Great Britain?

The aim was to collect primary data (mainly from treatment services and other stakeholders) and to supplement this with two secondary data trawls –a literature review and an analysis of two years of data from GambleAware's treatment monitoring system, the Data Recording Framework (DRF).

## Methods

Four work packages were developed to use multiple methods and to ensure minimum disruption to service users and service providers:

**WP1: Rapid Evidence Assessment:** identifying need and mapping how effectively this is met in indicated, at risk, and treatment populations based on a systematic literature review using PRISMA[1] guidelines.
**WP2: Secondary Data Analysis**: DRF data were used to assess factors associated with engagement in treatment; the services associated with higher levels of treatment completion; and how those who engage with treatment services can be understood as groups with common presenting and engagement characteristics.
**WP3: Fieldwork component**: Using a comprehensive mixed methods approach involving key informant interviews with managers; focus groups and structured questionnaires with staff, and documentary analyses to assess how needs are measured and addressed in specialist gambling services; Active engagement of users and carers to assess their experience of engaging with services.
We supplemented this in partnership with GamCare to allow service users to provide feedback online to extend the reach of the project. The overall philosophy was participative and inclusive to encourage as diverse a range of participants as possible.
**WP4: External Stakeholder Events:** To engage those not actively involved in specialist services and two events were held to throw open the consultation to a diverse range of stakeholders.

### *Work Package One – Rapid Evidence Review*

Three ACT team members ranked the 365 articles provided by NatCen (see NatCen report) from their paper sift for study inclusion based on title only review using the basic taxonomy of inclusion (I), exclusion (E), and possible inclusion (PI). This resulted in 114 papers following the first two trawls of abstracts and a final total of 57 papers included in the review once all the abstracts had been reviewed and inclusion criteria met. Summary findings were that there are

[1] Preferred Reporting Items for Systematic Reviews and Meta-Analyses – a standard format for undertaking systematic reviews

multiple vulnerabilities among those who seek treatment for problem gambling and there are elevated rates of mental health and substance misuse problems. Findings on crime and gambling showed that gamblers with co-occurring offending reported higher severity of gambling problems and more severe gambling debts, but were equally responsive to both Cognitive Behavioural Therapy (CBT) and to Gamblers Anonymous (GA). Homelessness proved to be another highly relevant factor in that gambling harms and problems are higher in the homeless population than the general population, that most homeless gamblers are not aware of services and that homeless gamblers were also at elevated risk of Post-Traumatic Stress Disorder (PTSD), bipolar disorder and anti-social personality disorder. Although we have to be cautious about making causal inferences, among those with disordered gambling, there are likely to be a range of complex co-occurring factors and so the provision of support and treatment must be structured in a way to manage such complex issues. In the area of demographic characteristics indicators for treatment seeking and engagement it was found that three primary areas of demographic characteristics need particular attention:

A. Gender: Women typically seek help for gambling problems at an older age, (and had later ages of onset) but typically report more rapid trajectories of problem onset. Women are more likely to report that gambling is associated with coping, loneliness and depression and that it is likely to be less linked to peer factors than for men.
B. Age: Treatment seeking is most commonly associated with men between the ages of 25-44 and (as indicated below in the analysis of the DRF data) it may be particularly difficult to engage and retain young people in appropriate help services for gambling problems
C. BAME groups: While there is a paucity of evidence in this area, there are indications that some ethnic groups may be at elevated risk of problem gambling and may be reluctant to seek appropriate help. There is a strong evidence base around indigenous populations' high rates of gambling problems from Australian research.

## *Work Package Two- Secondary analysis of the DRF*

The Data Reporting Framework (DRF) collects routine management information on the extent and nature of treatment demand for problem gambling and our analysis showed that:

1. Of the general population that are known to be experiencing gambling problems, only a very small proportion engage with specialist gambling treatment.
2. Older gamblers are more likely to complete treatment compared to younger age-groups.
3. Models of treatment engagement suggest that services should be encouraged to be more attractive to Black and Minority Ethnic (BAME) gamblers, gamblers aged under 35 years, gamblers experiencing personal relationship problems (e.g. relationship breakdown) and casino gamblers.
4. A preliminary taxonomy of treatment seekers divided this group into four categories ("sports gamblers"; "heavy gamblers response to treatment"; "non-sport gamers" and "female occasional gamblers") based on demographic characteristics, gambling behaviours and histories, and treatment responsiveness. This should form the basis for dedicated treatment pathways if these four groups are shown to be stable and robust with further empirical testing.

5. Agency-level predictors of treatment completion showed enhanced retention in residential gambling treatment compared to the Central North West London National Problem Gambling Clinic (CNWL NPGC) and the GamCare network. This suggests differential treatment outcomes for gamblers across the national gambling treatment system, although the numbers for the residential service and the National Problem Gambling Clinic are much smaller than the GamCare network.
6. Further work is required to enhance the robustness of the DRF to improve coverage and robustness including data validation checks within existing data management processes.

## *Work Package Three: Treatment service site visits*

Site visits were conducted at each of seven partner agencies below between June and August of 2019. Each site visit lasted for one to two days in which time the ACT team distributed structured questionnaires and semi-structured interviews to managers, staff, service users, referral agents, and affected others[2].

***Group 1: Managers of gambling treatment services:*** Ten senior level management staff were interviewed, with strong consensus that there is a solid foundation to measure, manage and address needs. This objective is challenged by a funding model that limits capacity for innovation and inter-agency working, and about flexibility of treatment delivery within the GamCare network. Areas highlighted for improvement in treatment:

1. Need for clear quality standards around treatment delivery.
2. A requirement for stronger processes for incorporating client feedback and involvement of experts by experience.
3. A concern about the limited provision of continuing care to clients and of linking effectively into mutual aid groups during and after treatment.
4. Structures for incorporating staff concerns and ideas were seen to need further enhancement and development.
5. Frustration at the lack of resources to develop integrated systems and recovery pathways to provide aftercare or on-going support services.
6. Lack of awareness even within the sector of pathways and models of care.

***Group Two: Staff of gambling treatment services***
There is a perception that gambling services are good at both measuring and meeting the needs of their clients, and around measuring risk. There was also a positive response around linking clients into other services, such as housing, debt and mental health services. There was a clear commitment by all the staff to the important work they do with service users and they identified the following strengths of the current system delivery:

1. Potential to provide a flexible service with relatively quick response time.
2. Commitment and experience of staff (including lived experience) was seen as a major strength.

[2] those who know someone with a gambling problem (either now or in the past) and have experienced negative effects as a result.

3. Innovative programmes were regarded as a core strength, and this was also perceived to be a key feature of partnership working with a diverse range of partners.
4. Training and skills base of staff were seen as positive, although there was a perceived need for 'more options' for treatment delivery including approaches to addressing mental health issues and 'different therapies' to address specific needs of people with gambling difficulties.

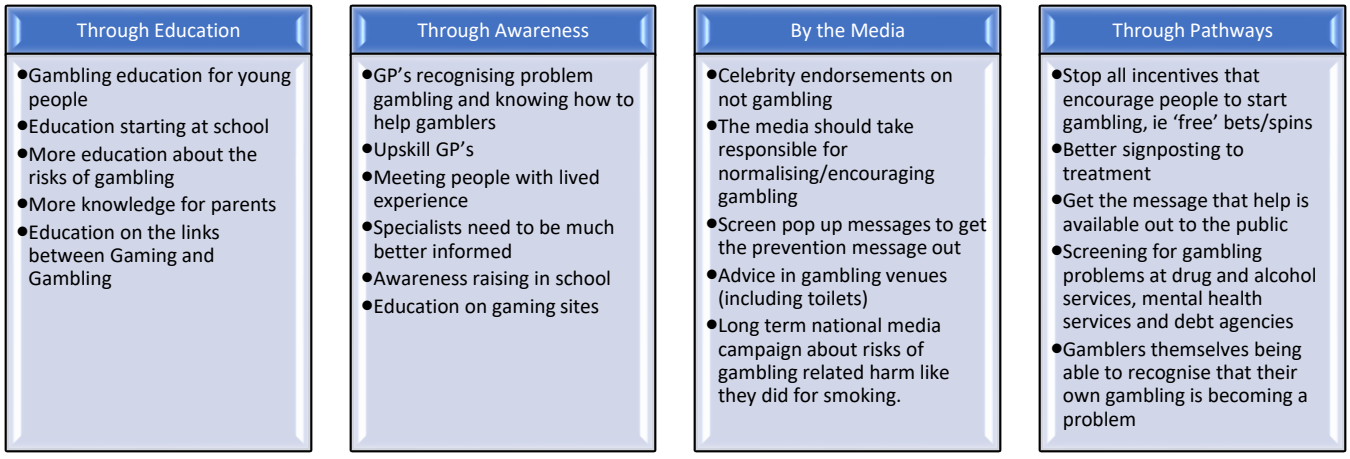
Staff remain dedicated to reaching service users, but expressed frustration about organisational structures and stated that the system does not allow the delivery of best service for the following reasons:

1. Inflexibility of the delivery model and lack of adequate aftercare, and a concern was expressed about no adequate recovery model being available.
2. Not enough peer support and mutual aid but increasing interest in SMART Recovery was reported among service users.
3. There is a strong emphasis on individual sessions when group treatment approach could be used to complement and supplement this approach.
4. There is a lack of outreach and community engagement is seen as a major limitation to engaging populations in need, and inadequate wraparound services.
5. There is not enough awareness raising for professionals or the general public.
6. There is a lack of links to GPs and medical services (referrals and liaison).
7. There are no measures for basic standards of care.
8. There is a lack of services for women
9. There is a lack of residential treatment places and 'few treatment possibilities between a few one-to-one sessions and rehab'.

***Group Three: Service users***

26 service users participated in the survey (of whom 18 were satisfied with the assessment process), 18 took part in focus groups during the site visits. Their perceptions of unmet need are summarised in Figure 1 below:

**Figure ES1: Perceived needs reported by service users**



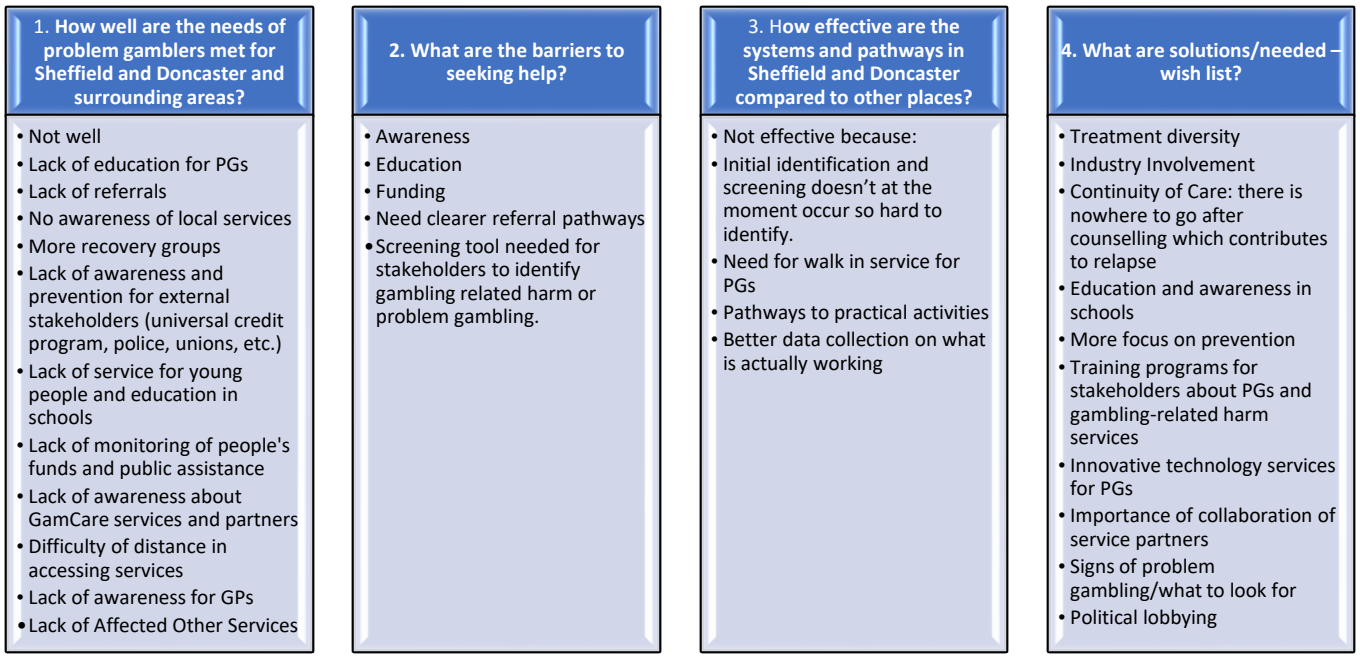
### *Group Four: Affected others*

Responses were obtained from affected others, with the main findings from affected others about treatment pathways including the statements that: “You have to find your own help”; “Professionals don’t know how to help you”; “one-to-one counselling [is beneficial], but that is limited”; “Family members don’t have professionals they can go to”; “Family members or professionals don’t have the confidence to talk to the gambler about seeking help”; “Families don’t know what signs to look out for”; “Wider awareness of what help is out there”; “Wider public information needed for family and friends”; and “Specialists that families may turn to need to be much better informed”

## *Work Package Four: External Stakeholders*

ACT conducted two stakeholder workshops over the course of the research. The first workshop was held in Sheffield, United Kingdom in partnership with Public Health England NHS Sheffield and the second in Doncaster in partnership with Rotherham, Doncaster and South Humber NHS Trust (RDaSH). The discussion from these workshops revolved around four themes about strengths, gaps, and needs (see Figure 2).

**Figure ES2: Key findings from stakeholder events**




## *Recommendations*

1. The development of quality standards for engagement and retention of service users;
2. Effective treatment pathway development as an integrated system of care;

3. Personalised packages of care that address client presenting issues to address the needs of particular vulnerable groups including young people, minority ethnic groups and those with co-occurring mental health, criminal justice and substance misuse issues;
4. Treatment processes that offer support around stigma and shame;
5. Greater flexibility in treatment packages underpinned by commissioning arrangements that promote partnership with a diverse range of local stakeholders and improved inter-agency working;
6. Clear models for continuing care including referral to mutual aid groups;
7. Greater commitment to a lived experience model as central to treatment delivery;
8. A comprehensive national media campaign to increase public awareness that addresses 'what is Problem Gambling' and that disseminates information about the services available at national and local levels;
9. Augment current staff support structures with formal processes for incorporating staff feedback and avoiding dual responsibility for line management and supervision;
10. Review of linkages with NHS providers of general and specialist healthcare with a particular emphasis on GP awareness;
11. A formal exercise to facilitate sharing of good practice among providers with an aim of assessing applicability across agencies (such an exercise will depend on management of the threat perceived by providers as in competition for resources).

## Section 1: Introduction

The National Strategy to Reduce Gambling Harms sets out as one of its strategic priorities the need to make significant progress towards truly national treatment and support options that meet the needs of current and future service users. In addition, this is identified as a priority within the Research Programme and is a strategic priority for GambleAware, as the main funder of treatment for gambling harm in Great Britain. This research is intended to describe the nature of unmet need in terms of geography, demographics and severity of harm. The findings will be used by policy makers to inform future commissioning and fundraising decisions.

From February to September of 2019 GambleAware commissioned ACT Recovery and the National Centre for Social Research (NatCen) to conduct a national needs assessment to identify strengths, gaps, and obstacles in the delivery of treatment services in Great Britain. ACT Recovery and NatCen engaged in regular dialogue and participation through joint updates and meetings to ensure synergy and maximum value across the project, and each focused on specific domains within the project to address the following research questions:

1. What are individual needs (service users and affected others), and how well are they met?
2. How well do services measure, monitor, and meet the needs of those seeking help?
3. How consistently and effectively are gambling treatment needs met across the system of provision in Great Britain?

**Table 1.1: Breakdown of component parts of the overall gap analysis**

| Needs Assessment Partner Focus | |
|---|---|
| National Centre for Social Research | General population and gamblers who may be 'at risk' but who have not yet contacted the existing GambleAware funded gambling treatment system. This population will be identified through contact with addiction and behavioural health service providers that may come into contact with at-risk gamblers not in contact with specialist services. |
| ACT Recovery | Populations that have been in contact with the gambling treatment system including but not limited to those seeking treatment, that have engaged in services but dropped out, those awaiting treatment and those in treatment. |

For those in treatment and awaiting treatment, the key question is the extent to which their needs have adequately been assessed and addressed. In both parts of the overall project, there are a number of work packages. The four work packages for ACT Recovery are outlined in the following chapter with more specific information and findings in each of the following relevant chapters.

The overall aim was to use multiple methods to identify the extent of unmet demand and need among at risk and indicated populations, including those who were currently, or had, previously engaged with treatment services.

## Section 2: Methodology

ACT Recovery used a mixed-methods approach involving four separate work packages to address the three research questions within treatment services system in Great Britain. Below is a brief overview of the overall project methodology with more specific information in the following chapters which describe each of the work packages.

**Table 1.2: Project overview**

| **Ethics** |
|---|
| **Preparation** |
| ACT Recovery received ethical approval from Sheffield Hallam University for the ACT work packages of the project. All forms and information collection have been deemed to be General Data Protection Regulation (GDPR) compliant and approved for this project. |

| **Rapid Evidence Review** |
|---|
| **Work Package 1: Systematic Review** |
| Identifying need and mapping how effectively this is met in indicated, at risk, and in treatment populations based on a systematic literature review using the Preferred Reporting Items for Systematic Review Analysis (PRISMA) guidelines. |

| **Secondary Data Analysis** |
|---|
| **Work Package 2: Analysing the DRF data** |
| Using the Data Reporting Framework for standard activity reporting by gambling treatment providers and other data sources to assess:<br>1. What factors are associated with engagement in treatment?<br>2. What services are associated with higher levels of treatment completion?<br>3. How those who engage with treatment services can be understood as groups with common presenting and engagement characteristics. |

| **Original data collection** |
|---|
| **Work Package 3: Clinical Site visits and interviews** |
| ACT undertook the field work assessment using a two-pronged approach in this workstream to evaluate how services attempted to meet needs:<br><br>1. Using three techniques to create a comprehensive mixed methods approach: key informant interviews with managers; focus groups and structured questionnaires with staff, and documentary analyses. Based on these methods, we assessed how needs are measured and addressed in specialist gambling services in order to gain a clear and coherent indication of strengths and areas of improvement for service users by treatment providers.<br><br>2. Active engagement of users and carers: in each of our site visits we used structured questionnaires and focus group methodologies to assess the experience of engaging with services and both users' and carers' perceptions of needs measurement and |

planning to ensure that the perception of need was assessed in the following populations:

A. Service users
B. Affected others.

We supplemented this in partnership with GamCare to allow service users to provide feedback online to extend the reach of the project. The overall philosophy was participative and inclusive to encourage as diverse a range of participants as possible.

**External Stakeholders**

**Work Package 4: Stakeholder events**

This was a core part of the fieldwork that was designed to engage those not actively involved in specialist services. Two events were held in partnership with a city council and National Health Service (NHS) provider (in Sheffield and Doncaster respectively). The aim was to throw open the consultative component of the fieldwork to as diverse a range of stakeholders as wanted to participate. ACT engaged, as part of a systems level assessment, partner agencies (referral sources, onwards referrals and partner agencies) in assessing joint working and processes for meeting holistic needs of problematic gamblers. These took place in two workshops throughout the course of the research in which questionnaires and focus groups were administered (based on the same structured instruments used that were used in Work Package 3).

**Project Advisory Groups**

ACT Recovery has recruited a Project Advisory Group (PAG) that met once a month at the Gambling Commission; key stakeholders who were involved in the research have been present throughout in order to provide continuous oversight of the project. PAG members have included key stakeholders, such as: service providers, experts by experience, National Health Service (NHS) representatives, GambleAware, NatCen, and an academic. Engagement in the process was mixed although the service providers were all engaged and were highly supportive and this process was important in developing the network of services for the Work Package 3 site visits.

## Work Package 1: Rapid Evidence Assessment

**Overview**
For the Rapid Evidence Assessment (REA), ACT has focused on indicated need (i.e. for those who have engaged with some form of help seeking) and mapping how effectively the needs of this group is met. As the literature uses a diverse range of definitions (e.g. 'problem gamblers', or 'pathological gamblers') we have been inclusive but our aim is to include all of those who have been adversely affected by their own gambling or by the gambling of others). This is based on a systematic and thematic identification and analysis of relevant international and national literature.

To ensure adequate synergy with the NatCen process, we have used the same initial trawl of candidate articles from the original NatCen search, but have used this database of research papers to answer three basic questions:

1. What is the evidence of treatment need and treatment demand in indicated populations and how effectively do these populations engage with gambling treatment services? This assesses the extent to which certain populations are more likely to experience problem gambling and how well are their needs met.

2. What is the evidence around early interventions such as helplines and self-exclusions as mechanisms for effective system engagement with gambling treatment? In other words, how effectively does treatment respond to various levels of demand and need?

3. What is the evidence around barriers and facilitators to treatment engagement and to achieving long-term recovery from disordered gambling (i.e. how well does the gambling treatment system meet identified and engaged need)?

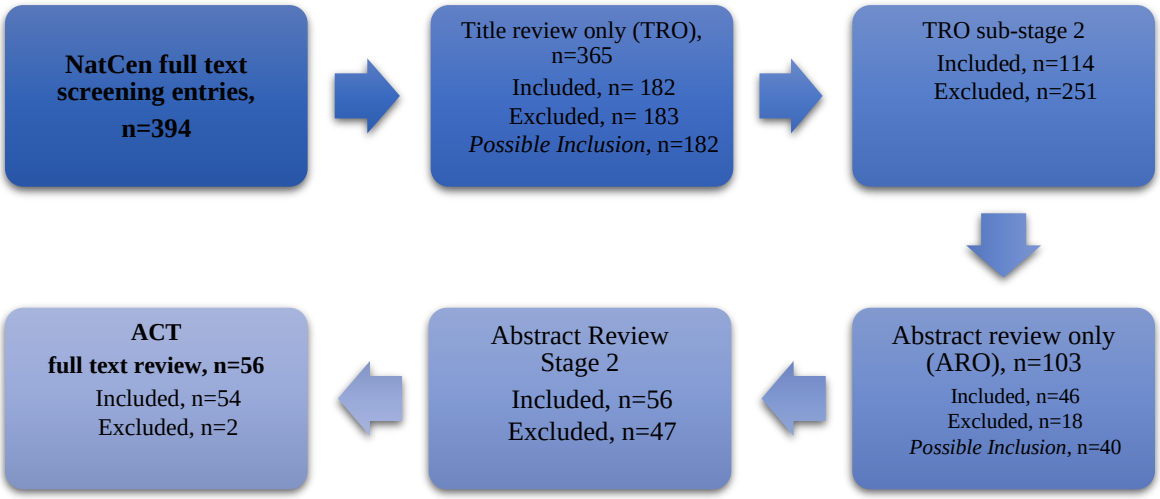
**Methods**
This evidence review was conducted partly in conjunction with project partner NatCen. NatCen undertook the initial literature search based on an agreed set of research questions, and inclusion and exclusion criteria. That process is detailed, including the search criteria and list of databases searched, in NatCen's Workstream 1 report which is published alongside this report on GambleAware's website.

NatCen provided ACT with its titles selected for full text screening (n=394). Of this list, there was one duplicate article and 28 titles with no article available, leaving a total of 365 articles. ACT then conducted a review of the remaining texts (n=365) using a tripartite stage process for study inclusion. The first stage was a title review, followed by an abstract review, and finally by a full text review, with concordance between reviewers used as a reliability mechanism in each of the three stages. The first two stages were undertaken in two sub-stages (See Figure 1 below). To differentiate and granulate the ACT review from that undertaken by NatCen, the ACT review posed three questions that became our inclusion criteria:

1. Does the article address treatment need (and not effectiveness)?
2. Does the article address engagement or retention in treatment services?

3. Does the article address specific sub-populations or geographic regions?

**Figure 1.1: Article review flowchart for the REA**




The criteria for inclusion were around both relevance to the research questions and the quality of the article. The basic quality inclusion criterion was around publication in a peer-review journal and either the inclusion of original primary data (either qualitative or quantitative) or a systematic or thematic review that offered original insight or analysis. In the first stage, each of the three ACT team members ranked the 365 articles for study inclusion based on title only review using the basic taxonomy of inclusion (I), exclusion (E), and possible inclusion (PI). From this twin phase of title only review and the inclusion of additional materials, n= 114 titles were included, and 225 were excluded. A total of 114 titles were identified for the second stage.

The second stage of the review was of abstracts only. Of the 114 titles, abstracts were not locatable for 11. Thus, 103 articles were included for abstract review. As with the title search, each ACT member (n=3) ranked the 103 articles using the same taxonomy that had been constructed from an initial discussion of core and emerging themes. From the first level abstract review, n=46 titles were included by consensus, 18 were excluded, and 40 were classed as 'possible inclusion' as there was disagreement between the reviewers. From the possible inclusion group, it was first agreed that where two of the three reviews had resulted in a rating of exclusion (n=17), those articles were excluded from further review, leaving n=23 PI articles for a second review. The second level review resulted in an additional n=10 for inclusion and n=13 for exclusion.

In sum, 56 articles were selected for full text review. However, with one of the entries, only the abstract was available; with a second, the article was not accessible. Therefore, those two entries did not meet the basic inclusion criteria, leaving a total of 54 articles for full text review. These

articles are listed in Appendix 1. However, an additional three papers have been added at the external review stage increasing the number of papers reviewed to a total of 57, based on feedback from GambleAware in their review.

The following summary and analysis are divided into three sections to provide accurate and synthesised responses from the literature to each of the three research questions. In each section you will find the research question at the top, then the literature review pertaining to that question, and then the relevant conclusion and discussion at the end of each section.

## Section 1: Treatment need and demand

Question 1: What is the evidence of treatment need and treatment demand in indicated populations and how effectively do they engage with treatment services? This assesses the extent to which certain populations are more likely to experience gambling related harm and how well their needs are met.

### 1.1 Unmet Needs

In a German study, Bischof et al (2014) recruited addicted gamblers from three sources – a telephone population survey, gambling venues and a project telephone hotline targeting people with gambling problems. The resulting sample of 395 individuals reported higher levels of treatment utilisation based on older age, greater gambling severity, more adverse gambling consequences and greater social pressure. Just under 60% of the sample reported some form of previous treatment utilisation, although this was only 16% among the telephone sample and 24% among those recruited from gambling venues. The authors concluded that specialised treatment only reach a minority of pathological gamblers. Bischof and colleagues (2014) cite the Epidemiological Survey on Alcohol and Related Conditions (Slutske, 2006) which showed treatment seeking in 9.9% of pathological gamblers in a large national representative sample.

Martin (2013) undertook a survey of college students in the US and identified a potential problem rate of 4.2%, half of whom provided contact information that allowed help information to be sent to them, suggesting that online surveys are a potential way of engaging addicted gamblers not in contact with services.

### 1.2 Demand

#### *1.2.1 Reasons for seeking help or not*

Assessing the overall question of help-seeking, Hing et al (2015) recruited 103 addicted gamblers from multiple sources including previous study participants and users of specialist treatment services. The authors found that the type of services engaged with depended on the severity of gambling problems, the goals the person intended to achieve (such as complete abstinence) and the perceived effectiveness of the intervention type. Other key influences were encouragement or pressure from others, support to achieve particular goals (e.g. counsellors supporting their clients to self-exclude), the participant's own willingness to disclose their problems, their sense of independence and pride and the potential for other (informal) sources of help. Further, the continued use of an intervention was contingent on the initial experiences of it.

Pulford et al (2009) compared a cohort of treatment seekers with a group of gamblers who had not sought help in New Zealand on their perceptions of help-seeking motivations. Although financial factors were cited by both groups, help-seekers were more likely to cite health factors and problem prevention, and non-help seekers were likely to cite relationship reasons.

### *1.2.2 Demand in specific populations*

To examine the characteristics of demand, Jamieson et al (2011) compared characteristics of those seeking gambling treatment with two substance misuse treatment groups in Thunder Bay, Ontario - those with gambling problems and those without. People whose primary problem related to their gambling were older, more likely to be female, more likely to be highly educated, more likely to be employed or retired, were more likely to have a lifetime mental health diagnosis (although not a current one), were more likely to have a current depressive disorder and, perhaps surprisingly, less likely to have criminal justice involvement. It is also worth noting that most of those presenting with a primary gambling problem did not have a co-morbid substance use disorder (for further review of the substance misusing population, see section 1.3.2).

Kowatch and Hodgins (2015) used the trans-theoretical model (which involves five stages of treatment engagement – pre-contemplation, contemplation, preparation, action and maintenance) to examine factors associated with help-seeking in a community sample of 136 people from Calgary, Canada, with gambling problems, of whom 91 were retained in the study for 12 months. There were three significant predictors of treatment seeking at 6 and 12 months - greater problem severity, greater readiness to change and greater recognition of public awareness campaigns about problem gambling.

## *1.3. Specific populations*

The populations specified in this section were identified exclusively a-posteriori, based on the articles that were included in the review process. Only those populations indicated in the research reviewed were included - this may mean that other vulnerable populations who have not been researched are at enhanced risk but there is insufficient (or no) research to merit their inclusion. This process was undertaken through inter-rater assessment at both the title and abstract review stages, where initial themes were developed.

### *1.3.1 Gender*

Echeburua et al (2011) assessed 103 gamblers seeking treatment (51 women and 52 men) from treatment services across Spain and found life course differences with women on average four years older at the point of treatment seeking and with later onset gambling, but on average they had become dependent on gambling more rapidly than men (a mean of 5.8 years from onset compared to 9.7 years for men). Women treatment seekers were more likely to be divorced, to have lower incomes, they were more likely to report gambling as a way of coping with loneliness and escaping negative emotions, and were less susceptible to peer pressures. Echeburua et al (2011) concluded that women have different treatment needs and that there is a "need of a more intensive treatment programme in women and more focused on how to cope with depression" (p.224).

Avery and Davis (2008) examined women's supports in Arizona and California, USA, for recovery from gambling related harms based on reports from 136 women who had achieved at least six months abstinence from gambling. The authors reported that GA was the most commonly used resource, with 75% reporting attending at least one meeting. This contrasts with 43% who had used professional services and 10% who reported natural recovery. For informal supports, women reported that GA members were the most important support system (70%), followed by friends (40%), spouse or partner (36%), children (29%), and parents (18%).

In a U.K. qualitative study, Kaufman, Nielsen and Bowden-Jones (2017) identified three types of barriers to treatment engagement for women. They identified external barriers in the form of inaccessibility (including waiting times and distance), as well as problems identifying suitable services, including issues around signposting from, for example, primary care. Internal barriers included denial and fear (which delayed treatment seeking), stigma and feeling like an 'outsider' (partly because of their gender) in treatment services.

Testing the benefits of women-only gambling treatment, Piquette and Norman (2013) conducted in-depth interviews and a focus group with five women who had attended a 12-week female only group for those with gambling disorder in a large western Canadian city. The perception was that it was a validating experience and they valued support from other women and from the counsellors, that they learned from each other through the group process, and that they learned how to recover from their problems in the group. Similarly, Ledgerwood et al (2012) discuss gender differences among helpline seekers in Section 2.

***There are clear differences by gender in trajectories of gambling careers, experiences in treatment services and in co-occurring issues that would suggest the need for exploring gender-specific provision with a greater focus on social isolation, depression and the management of stigma in services for women gamblers.***

### *1.3.2 Substance misuse*

Compared to a general estimated prevalence rate of problem gambling of 0.4% - 4.2% in the US, Himelhoch and colleagues (2015) reported a rate of 40.5% who met DSM-V criteria for a Gambling Disorder in out-patient and methadone clinics (of whom 36.4% were in the severe range).

In a study of drinking patterns among problem gamblers (this is the term used by the researchers in this study), before, during and after treatment, Rash, Weinstock and Petry (2011) followed 163 gamblers over 36 weeks in a US study and showed reductions in drinking associated with gambling treatment entry that were sustained during and after treatment. Nonetheless, 31% of the sample continued risky drinking during and after gambling treatment and the authors concluded that the changes in drinking cannot be attributed to the gambling treatment as they are often initiated before the start of gambling treatment and may reflect other life circumstances.

In a cross-sectional survey of 55 addiction treatment centres in France, Nalpas et al (2011) found that 6.5% of 2790 patients were pathological gamblers[3] and another 12% were 'subsyndromal gamblers', with men twice as likely to be disordered gamblers as women.

[3] This is the term used by the authors, and we have not altered their characterisations of the samples in each study reported

Screening a recovering population using the South Oaks Gambling Screen, Majer et al (2012) identified that over half (50.7%) of a cohort of 71 individuals in Oxford House residences had either problem gambling or probably pathological gambling (and the authors point out that this is in a population not new to gambling).

***It is clear that there are elevated rates of risky and problem gambling in addiction treatment services although no causal inferences can be made about the association between substance use and gambling as almost all of the included studies are cross-sectional in design.***

### *1.3.3 Psychiatric co-morbidities*

Dowling and colleagues (2015) published a systematic review of evidence on co-morbid psychiatric problems among treatment seeking problem gamblers and reported an overall weighted mean of 74.8% for any current psychiatric co-morbidity (the lifetime rate was 75.5%), albeit with a significant range between the studies included in the review. Broken down into specific diagnoses the rates were:

**Table 1.3: Rates of psychiatric morbidity (from Dowling et al, 2015)**

| Rates per Diagnosis | | |
|---|---|---|
| **Alcohol or substance use disorder** | 22.2% | Based on 26 studies |
| **Mood disorder with the highest rate for major depressive disorder** | 23.1% | Based on 22 studies |
| **Anxiety disorder with the highest rates for social phobia and generalised anxiety disorder** | 17.6% | Based on 15 studies |

In a study of gambling and PTSD, Najavits (2010) compared treatment-seeking in groups with gambling disorder from Toronto and Boston, PTSD and both gambling disorder and PTSD. She found that treatment seeking (both current and lifetime) was markedly higher in the PTSD and combined condition (more than half compared to around one third of gamblers only), yet those gamblers who sought treatment reported equal satisfaction and similar number of episodes of treatment.

In a review and meta-analysis, Dowling and colleagues (2015) summed data from nine international studies to estimate that 47.9% of problem gamblers displayed personality disorders with the most common disorders being narcissistic (16.9%), anti-social (14.0%), avoidant (13.4%), obsessive-compulsive (13.4%) and borderline (13.1%) personality disorders.

Fifty-three consecutive out-patient admissions to a gambling clinic in Denver, USA, were screened by Soberay and colleagues (2014) who reported a rate of 38% for depression, 30% for mood disorder, 60% for a generalised anxiety disorder, and 51% for PTSD. Overall, 87% were indicated for at least one disorder, with 45% indicated for three or more disorders. The positive finding was that gambling treatment was found to be effective, irrespective of how many co-occurring psychiatric disorders were present.

### *1.3.4 Personality disorders*

In the review and meta-analysis mentioned above, Dowling and colleagues (2015) summed data from nine studies to estimate that 47.9% of problem gamblers displayed personality disorders with the most common disorders being narcissistic (16.9%), anti-social (14.0%), avoidant (13.4%), obsessive-compulsive (13.4%) and borderline (13.1%). Ramos-Grille et al (2015) compared personality profiles in a group of 44 treatment seekers in Spain for gambling problems and 88 controls and reported that the problem gamblers were significantly more likely to show indications of neuroticism-anxiety and of impulsivity. At one-year follow-up, the group who had remained abstinent (n=22, 50%) were significantly lower on impulsivity than those who had relapsed.

### *1.3.5 Co-occurring criminal behaviours*

In a randomised study comparing problem gamblers with and without a history of criminal behaviour, Ledgerwood and colleagues (2007) reported that gamblers with co-occurring offending (27.3% of the sample) reported higher severity of gambling problems and more severe gambling debts, but were equally responsive to both CBT and to assertive referral to Gamblers Anonymous (GA).

### *1.3.6 Homelessness*

In a qualitative study with 30 homeless gamblers in Canada, Guilcher et al (2016) identified the need for person-centred interventions and contrasted this with the sample's experiences of failures of empathy and positive therapeutic relationships, of significant gaps in knowledge of gambling among professionals, and of poorly integrated care and services (particularly around the area of mental health and the lack of timely access to prevention and recovery services). Participants also spoke of the need for services that supported enhancing life skills and the greater need for peer-based support services.

Holdsworth and Tiyce (2012a) conducted in-depth interviews with 17 homeless problem gamblers and 18 service providers in northern New South Wales, Australia, and an additional focus group with the homeless gamblers. Almost all participants identified the link between gambling related harm and homelessness, although the link was often embedded within the extreme life complexities of homeless people, and was generally concealed and not readily discussed, due to issues of stigma and shame. In a subsequent paper based on the same samples, Holdsworth and Tiyce (2012b) argued that gambling and homelessness have an amplifying and accumulating effect that compounds over time including issues around mental health, substance abuse, financial problems and complex health needs, as well as problems with the criminal justice system and an inability to find and sustain employment. These are compounded by stigma and social exclusion.

In a recent review, Sharman (2019) examined six studies (two each from the US, Canada and the U.K.) and concluded that gambling harms and problems are higher in the homeless population than the general population, that most homeless gamblers were not aware of services (and were unlikely to seek help as a result of exclusion and stigma) and that homeless gamblers were also at elevated risk of PTSD, bipolar disorder and anti-social personality disorder. Although methodological issues preclude simplistic conclusions, he reported that gambling typically preceded homelessness and that these issues arose most significantly in disadvantaged

populations. In one of the papers referred to in the review, Sharman and colleagues (2015) assessed gambling rates among 456 individuals seeking housing assistance in London and reported a problem gambling rate of 11.6% compared to 0.7% in the general population (and this was 20.8% among the male homeless sample).

### *1.3.7 Indigenous populations*

Hing et al (2012) recruited a cohort of Indigenous Australians at a cultural festival and found high rates of gambling (18% reported betting nearly every day) with a small proportion associated with domestic conflict, depression and violence. A total of 17% had sought help, of whom 10% had received help and 7% had not. Barriers to help seeking included not perceiving they had a problem, embarrassment or shame and lack of culturally appropriate services. In a follow-up paper in 2014, Hing and colleagues reported much higher than general population rates of gambling problems in Indigenous Australians (24 times higher than in the general population of New South Wales) yet low rates of help-seeking (8.8% of all gamblers). That help-seeking did not elicit help in nearly half of the cases and nearly half of all help-seeking was from informal sources. Preferred help was from a local Aboriginal gambling service or from an Aboriginal liaison worker, with particularly low ratings given to helpline services.

## 1.4 Section One Conclusion

While the gambling research field is beset by two main problems - a paucity of evidence about treatment needs and its relationship to demand on the one hand, and significant methodological limitations primarily based on an over-reliance on cross-sectional survey data - there are important and consistent results that provide at least partial answers to some key questions about the demand for gambling treatment. However, it should be noted that there is a paucity of U.K. research with very few of the studies cited in this review being based on British evidence. This adds to the complexity of application as cultural specificity may question the validity of translation to the British context. The DRF data collected by GambleAware offers the potential for routine monitoring, on the basis of which future enhancements can include treatment outcome indicators and monitoring of trends and engagement factors, as well as survival patterns (see secondary data analysis chapter).

There is evidently a low rate of treatment seeking (estimated at around one in forty of problem gamblers, although not all of those who seek treatment will be disordered gamblers) which is markedly lower than what we know about other addictions in which estimates are typically that around 10% of problem users will seek help in some form each year), although some evidence that the act of surveying may be a mechanism for early engagement for those who may be experiencing problems with their gambling.

In the advice provided by the Advisory Board for Safer Gambling (ABSG) on the National Strategy, section 40 asserts that "We do not know how many people would benefit from which sort of treatment. But this statistic compares badly with equivalent figures for those being treated for alcohol or drug addiction" (ABSG, 2019, p.16), based on an estimated 2.6% of problem gamblers accessing treatment. Work package 2 will also report on low rates of engagement and completion among those gamblers who do attempt to access gambling treatment.

This current review concludes that the primary driver of demand is need – i.e. it is the severity of gambling related harm (and the resulting adverse consequences) that drives treatment demand, supplemented by personal readiness to change and openness to accessible help. As reported in the context of alcohol and drug recovery, while sustained change is often driven by social change factors, the initiation of a recovery journey frequently results from a crisis event arising on top of a cumulative fatigue with the lifestyle (Best et al, 2008). It is encouraging that there are consistent findings about the limited role that demographic factors play in predicting treatment engagement once need has been established. However, there is consistent and reliable evidence (e.g. Echeburua et al, 2011) that women have a different trajectory into problem gambling with later onset and a more rapid trajectory to problems suggesting a need for a more assertive and early intervention approach to meet their needs. There is some evidence that female gambling is more likely to be associated with social isolation and psychological health issues, although how this affects problem trajectories is not known and this should be the subject of future research.

For an overview of pathways through treatment for women, see Dowling (2010) paper in treatment pathways section.

Additionally, there is a growing literature on the increased risk of gambling related harm in indigenous populations and the role of culture, context and ethnicity is a key area for future research. In Great Britain, there is a shortage of evidence around cultural and ethnicity issues and this is likely to have a significant effect on both patterns of gambling (and so problems experienced) and willingness to seek help. There are other groups, one example of which may be the LGBTIQ community around which there is a significant evidence gap not only in Great Britain but also internationally.

There are clearly elevated gambling related harm risks among populations with primary substance misuse (including those in recovery) and mental health problems, although the evidence presented here would suggest that co-morbidity is not a barrier to effective engagement in treatment nor to positive treatment outcomes. This is a message that needs to be clearly communicated to problem gamblers, but also to family members and professionals given the elevated risk rates. There should also be increased focus on screening and early engagement of vulnerable populations for gambling related harm, including those with mental health problems, substance misuse and the homeless. This is likely to require significant increases in awareness raising and training for adjunct professionals in a range of the vulnerable areas identified above, as well as shared working protocols to support screening and assessment of gambling problems. The evidence presented gives further impetus to the requirement for integrated services and for staff in each service to be trained and supported in the delivery of integrated care models.

# Section 2: Addressing Demand and Need

Question 2: What is the evidence around early interventions such as helplines and self-exclusions as mechanisms for effective system engagement with gambling treatment? In other words, how effectively does treatment respond to various levels of demand and need?

## 2.1. Treatment engagement processes and pathways

### *2.1.1 Self-exclusion and the role of gambling venues*

In a German study comparing self-excluders from a control group, Dragicevic and colleagues (2015) reported that self-excluders were typically younger, had experienced more severe financial losses and adopted riskier gambling strategies than the control group. There were no differences in gender or in the types of gambling activities engaged in.

Based on in-depth interviews with 23 counselling staff from gambling treatment services in Queensland, Australia, Hing and Nuske (2011) examined opportunities and barriers for venue staff providing support and pathways to treatment. Barriers from the gambler's perspective included shame, denial and concerns about confidentiality, as well as the perception that this is not the role of venue staff. The counsellors also felt that the venue staff would have a conflict of interest, and may fear being seen as interfering or being abused if they intervened. Participants also reported that clients reported mixed experiences from venue staff if they attempted to self-exclude and this compounded feelings of embarrassment and shame about their gambling. Ten of the counsellors had experience of training staff and felt that this generated both pathways and confidence about referral.

### *2.1.2 Helplines*

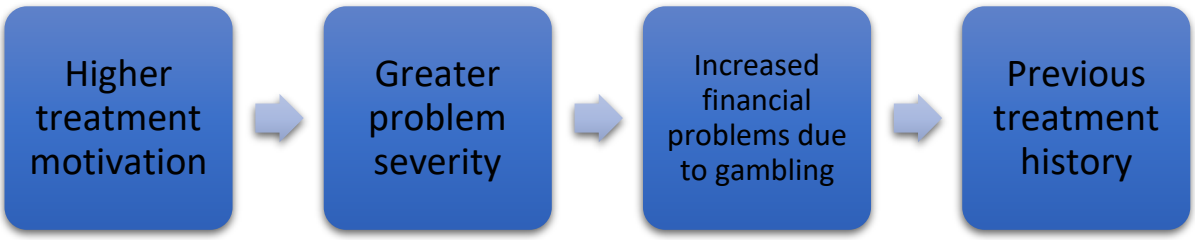
The effectiveness of helplines as a pathway and an intervention was tested in Quebec, Canada, by Ferland and colleagues (2013). Based on 115 'bogus' calls to a helpline, they found that 87% of calls received an appropriate response, although this was markedly poorer if the call was designated to meet the needs of an affected other. Similarly, referral calls were more likely to receive an appropriate response than calls seeking information.

Similarly in a study of a national online chat and email service in Australia, Rodda and Lubman (2013) reported that almost 70% of 1,722 people using the service were seeking formal help for the first time (with 78% of email users first time treatment seekers), suggesting its potential systemic role as an introductory portal. The authors concluded that a key facet of the approach was to have multi-modal service options to increase early engagement opportunities for first-time help seekers. Using the same online help service, Rodda et al (2014) identified four subtypes of service users for online help - i. high readiness to change but low gambling abstinence self-efficacy, ii. high readiness and low confidence, iii. moderate readiness and confidence and iv. high importance of change but low confidence and readiness. The authors concluded that early interventions should focus less on building motivation (which is already there) and more on developing self-efficacy, although outcome data are needed to test these initial findings.

Ledgerwood et al (2013) used a two-stage process to assess treatment engagement among users of a helpline in Michigan, USA. Although only 202 of 571 users of the helpline agreed to

participate (35%), 143 (71%) were successfully interviewed two months later of whom 67% had engaged in some form of further support - 93% engaging in structured treatment and 28% accessing Gamblers Anonymous. Predictors of further treatment engagement were:

**Figure 1.2: Predictors of effective treatment engagement**




Ledgerwood et al (2012) also examined gender differences in problem profiles among helpline users with women reporting greater gambling severity, greater financial difficulties and greater engagement with mental health services. Despite this, they also reported more readiness to change and more active help-seeking. The authors concluded that female gamblers who use helplines may require more urgent support and help.

In a New Zealand study examining gender differences among users of a helpline and outcomes up to one year later, Kim et al (2015) reported that women typically had shorter duration of gambling careers but greater gambling problem severity, greater psychological distress and lower quality of life in a cohort of helpline callers randomly assigned to a standard telephone intervention. Men were more than twice as likely to access treatment following engagement with the helpline. Overall, there were significant improvements over time in gambling and other psychosocial outcomes, but gender was not a significant predictor of outcome.

Based on data from 2,900 callers to a helpline in West Virginia, USA, who were offered an appointment for face-to-face treatment, Weinstock et al (2011) reported that 76% accepted the appointment and 55% actually attended the appointment. Attendance was predicted by male gender, greater age, greater education, greater problem gambling severity, prior gambling treatment (although prior attendees were less likely to have accepted the referral in the first place) and the appointment being within 72 hours of the referral.

Hing et al (2013) assessed Australian helplines from the perspective of family members seeking support (referred to in the paper as 'concerned significant others'). The paper was based on 48 telephone interviews (36 women) with callers to a free gambling helpline, half in connection with partners as gamblers and half in connection with children as gamblers. Reasons for calling were mainly about worries around escalation in gambling related problems, negative emotions, problems maintaining normal daily life and concerns about the welfare of dependents. They generally reported low awareness of other kinds of gambling help, and other barriers included shame and the desire to solve the problems themselves.

In a further Australian study of problem gamblers receiving online counselling, Rodda et al (2013) identified four clusters of reasons for selecting online counselling compared to other forms of help for online help services in Victoria, Australia. The largest reason was around convenience (51% of participants) with other core reasons around it being a good place to start engaging with gambling treatment (34%), confidentiality (27%), and because of a preference for engaging with the computer rather than face-to-face (27%).

In the Himelhoch et al (2015) paper cited above, 90% of substance use treatment patients were comfortable completing a range of brief gambling screening questionnaires suggesting that this is not a significant barrier to engagement. However, few of their participants reported that they had ever discussed their gambling problems with their substance misuse providers.

### *2.1.3 Self-help materials*

In a study comparing methods of recruitment into self-help treatment, Boudreault and Giroux (2018) compared problem gamblers recruited via advertisement with those recruited through a volunteer bank who had previously participated in gambling self-help treatment. Those recruited through advert had higher severity of problem gambling, but did not have a higher rate of engagement in the self-help materials.

### *2.1.4 Primary care*

A less promising pathway would appear to be via primary care. In a study of 71 GPs in Switzerland, Achab et al (2014) reported that problem gambling was only screened by 7% of GPs, while 32% reported that they did not know what to do with problem gamblers. 79% of participants reported that they were dissatisfied with their knowledge of problem gambling, and 77% reported that they needed more training in this area.

### *2.1.5 Ambulatory treatment*

Based on a sample of 77 women attending cognitive behavioural treatment in Australia, Dowling (2009) found that 62 (78%) completed treatment with only gambling severity predicting treatment outcomes but not completion (in other words, no demographic factors were associated with the risk of drop-out).

Pfund et al. (2018) assessed the impact of a motivational letter to people who had contacted gambling out-patient services through a randomised assignment of a cohort of 69 people in a medium-sized, metropolitan city in the southeastern United States to either standard waiting or to a motivational letter and a reminder call. Just under two thirds of the whole sample attended at least one treatment session, but significantly more (76%) in the active condition than in the standard waiting time (51%), indicating the potential benefit of assertive support for initial treatment engagement.

In a study of 846 treatment seekers at a specialist gambling service in the U.K., Ronzitti et al (2017) reported a treatment completion rate of 55% with 27% dropping out before the start of treatment and 17% during treatment. Pre-treatment dropout was associated with younger age and co-occurring drug use, being single was associated with both pre and in-treatment dropout and in-treatment dropout was also associated with being a smoker, having a family history of gambling problems and having a lower PGSI score at assessment. See Work Package 2 for our

own analysis of DRF data in this area which supports this finding of a high rate of early attrition from specialist gambling treatment.

### *2.1.6 Residential treatment*

A different approach to treatment pathways was adopted in a German study of residential treatment undertaken by Buchner et al (2015). They reported that only around 1% of pathological gamblers received residential treatment with the majority of those seen (90%) being men with 93% having at least one co-morbid disorder. The vast majority (96%) accessed treatment via counselling services with barriers identified including pride, shame, denial and the belief that they could resolve their problems on their own. In a British study of residential treatment, Roberts et al (2019) examined 15 years of retention data in two British residential gambling treatment facilities (London and Birmingham) and reported a drop-out rate of 51.3%, with better retention associated with longer planned treatment. The authors concluded that lower retention was associated with greater age, higher levels of debt, previous treatment history, higher levels of depression and adverse childhood experiences. For the experiences of homeless men, see the Guilcher et al (2016) paper in Section 1 above.

## 2.2 Section Two Conclusion

In terms of pathways and early interventions, there is supportive evidence around self-exclusion (although this is tempered by concerns around implementation and effective engagement by gambling providers) and a strong and consistent evidence base around helplines with a potential dual role as a standalone form of early intervention and as a potentially effective conduit into treatment. Some studies showhigh rates of attendance at face-to-face treatment following engagement with helplines. There is also a significant potential role for the helplines to act as a 'safety net' to engage clients who drop out and to take a more proactive role in ancillary and aftercare support.

The effectiveness of the referral process may be partly a consequence of the speed with which treatment appointments are offered (in 2018, Pfund and colleagues also demonstrated the benefits of letters and calls to support initiation into gambling treatment), and possibly around the quality of the initial engagement and how it is perceived by the caller. It also reflects the key themes of the current review as internal drivers of severity of gambling problems, readiness for change, more financial difficulties and the quality of previous treatment experiences. In Australia, the R2C model[4] (Lubman et al, 2019) offers preliminary evidence of a modular evidence-based psychological intervention that can be delivered by telephone or helpline that can support early engagement in treatment or act as a standalone intervention. Thus, in the British context, the gaps that need to be addressed around data collection would be around 'treatment journeys' (including transitions between the main providers) and horizontal integration (including effective engagement of linked needs including debt services, housing, substance use and mental health). The secondary analysis in this report addresses the issue of geographic gaps,

[4] R2C is Ready2Change a modularised intervention of 2-6 sessions that can be delivered online or by telephone

but a systems model should also look at extending a service framework to develop from early interventions through to aftercare and ongoing recovery management in the community.
As a standalone, there are clear benefits to helplines in terms of ease and convenience for callers but also around confidentiality and helping individuals (particularly those new to treatment seeking to manage stigma and shame, key issues identified in section 3 of the results above). There is a disappointing paucity of research around self-help materials and workbooks for targeted populations and similarly around the role of GPs, with the one study available providing discouraging evidence around GPs as a current referral source. However, while there is insufficient evidence at a systems level, what there is suggests the benefits of an integrated treatment model, based partly on client preference and also on severity and complexity of individual presentations, with benefit for assertive linkage approaches and integrated pathways of care.

In terms of gambling treatment systems (a key issue in mapping needs), there is good evidence for psychosocial treatment and encouraging findings around the effective engagement of vulnerable populations, with higher gambling severity a positive predictor of engagement and completion. There was also a paucity of evidence around the pathways to and systemic role of residential treatment in meeting the needs of the most complex gamblers.

# Section 3: Barriers and Facilitators for Treatment

Question 3: What is the evidence around barriers and facilitators to treatment engagement and to achieving long-term recovery from problem gamblers (i.e. how well does the gambling treatment system meet identified and engaged need?)

## 3.1 Barriers and facilitators to engagement

Gomes and Pascual-Leone (2015) followed a cohort of treatment seekers in Canada over four waves of data collection before, during and after treatment. Among key recovery capital factors both abstinence self-efficacy and social support in the first month of treatment were facilitators that improved treatment engagement and reduced relapse while higher levels of depression were associated with both relapse and drop-out. Life stress was also associated with relapse. Importantly, baseline motivation and treatment readiness were not strong predictors of either retention or relapse.

In an Australian study, Gainsbury, Hing and Suhonen (2013) recruited 730 problem gamblers from a general public survey, gambling venues, helplines and treatment services to assess their experiences of facilitators and barriers to treatment entry. They reported low levels of awareness of gambling help services - with 39% aware of helplines, 27% aware of face-to-face services and 14% aware of mutual support services. Barriers to seeking help included internal factors such as shame and wanting to sort out their problems on their own as well as cultural issues for those from non-Anglo backgrounds. There were also practical issues (external barriers) reported such as inaccessibility, and the authors concluded that much more needed to be done to raise awareness of such services.

The importance of the therapeutic relationship in treatment has been demonstrated by Dowling and Cosic (2011) in a study of 475 treatment seekers, based on the reports of clients and therapists at a treatment service in Victoria, Australia. The authors found that treatment engagement factors (particularly the therapeutic relationship as rated by the client)are strongly associated with both gambling treatment outcomes and general functioning outcomes. This was a stronger predictor of outcomes than the number of treatment sessions attended.

In a 2009 review of the evidence around barriers to seeking treatment for problem gambling, Suurvali et al examined 19 papers (typically general population or active gambler surveys) and found considerable consensus around four major themes - desire to sort out the problem themselves; shame and stigma; unwillingness to admit that there is a problem and negative perceptions about gambling treatment. Additional themes were around perceptions of poor treatment quality and lack of awareness of treatment options. One of the key issues, addressed in the overall conclusion is that there is often a mismatch between gamblers' perceptions of treatment effectiveness and the outcome data, and the authors felt that marketing and awareness campaigns may help to address this omission. This is a key message of hope to increase engagement but also to reduce despair and self-harm among those gamblers who see no way out. Peer-based outreach is something that has been successful in the substance use field to carry this message.

In a further review, Suurvali, Hodgins and Cunningham (2010) reported on motives for change (n=10), on help-seeking (n=5) and on self-exclusion (n=4). They reported that help-seeking was typically in response to an actual or imminent threat (typically financial or relationship based), with similar reasons for seeking resolution (although this was more likely to also involve a lifestyle change and an evaluation of the pros and cons of gambling). Self-exclusion was a consequence of harms, attempts to regain control and was seen by many as a form of help-seeking as they were unable to quit on their own.

#### *3.1.1 Stigma*

In a separate Australian study, Hing et al (2016a) have also investigated the role of stigma as a barrier to help-seeking, based on interviews with nine gambling counsellors. The counsellors saw self-stigma as not only a barrier to engaging with treatment, but also as something that they had to engage with to improve engagement, improve self-esteem and to sustain and build the belief that recovery is possible. They also argued that building trust was challenging because of clients' fears of public stigma resulting in them seeking anonymity as a result of shame. This applied as much to relapse as initial engagement, creating challenges for client retention. The authors argued that challenging some of the damaging effects of stigma could be achieved through awareness raising and through public health education campaigns.

Examining stigma from a client perspective, Hing et al (2016b) recruited 44 of a sample of 203 participants in a prior study on problem gambling who took part in an in-depth interview. Participants were highly concerned about public perceptions and stigmatisation, fearing that they were negatively judged and stereotyped, and many internalised those feelings into self-stigma, resulting in shame, lower self-esteem and self-efficacy and manifesting in physical health problems. The primary coping mechanisms were secrecy and avoiding disclosure. Making services more anonymous and engaging families were suggestions made by the authors to overcome some of the stigma barriers to help-seeking among problem gamblers.

Horch and Hodgins (2015) studied self-stigma in a cohort of 155 problem gamblers in Canada, just over half of whom had never sought treatment. They found that most problem gamblers believed that gamblers are to blame for their problems (75.3%) and cannot be trusted (67.3%). However, the key finding of the study was based on a path analysis which showed that self-stigma (the internalisation of stigma) had adverse effects where greater shame led to more secrecy and higher levels of withdrawal coping, although in this study, this was actually associated with greater treatment-seeking, against the prediction of the authors.

## 3.2. Continuity of care

#### *3.2.1 Pathways to aftercare*

Furthering the theme of treatment engagement and drop-out, Dunn and colleagues interviewed 13 people who had withdrawn early from psychological treatment in Australia and 12 who had successfully completed treatment. The authors cite Evans and Delfabbro's (2005) paper suggesting that treatment seeking is generally a response to crisis rather than a growing awareness of a problem, and they found that issues of stigma and shame were prominent (and

that training should be provided to professionals to address this) and that social support post-treatment is important.
In a Spanish study examining relapse and drop-out during and after out-patient psychological treatment for problem gambling, Aragay et al (2015) found that single marital status was a risk factor for relapse both during and after treatment. Other 'within treatment' relapse factors included lower expenditure on gambling and harm avoidance personality traits. Post-completion risks also included lower gambling spending. Treatment drop-out was associated with younger participants, and with higher levels of novelty seeking.

### 3.2.*2 Recovery among problem gamblers*

Nuske and Hing (2013) conducted in-depth interviews with ten recovering gamblers in Australia and discovered a typical pathway that involved self-help, followed by professional and non-professional treatment followed by a return to self-help, with relapse often the catalyst for professional help-seeking. The authors emphasised the importance of storytelling on this journey to recovery, and the importance of taking back personal control over gambling.

Toneatto et al (2010) conducted two studies of recovering gamblers in Toronto, Canada, the first comparing recovering gamblers who either had or had not engaged with treatment services, reporting higher levels of severity in the treatment seeking group, but no differences in reasons for quitting or in co-occurring mental health or substance use disorders. The second study compared people in recovery without treatment to a group of active gamblers and reported that the active gamblers had higher levels of anxiety and a slightly higher rate of family history of problem gambling in the active gambling group.

## 3.3 Section Three Conclusion

Understanding of geographic and cultural barriers to engagement need to be framed in the context of more general barriers and facilitators, and in this area, there is a strong and consistent literature showing that the key barriers to engagement with services are:

**Figure 1.3: Internal Barriers to Engagement**

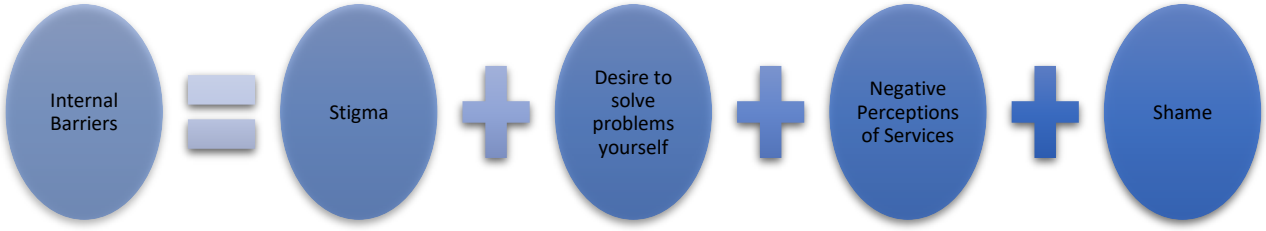
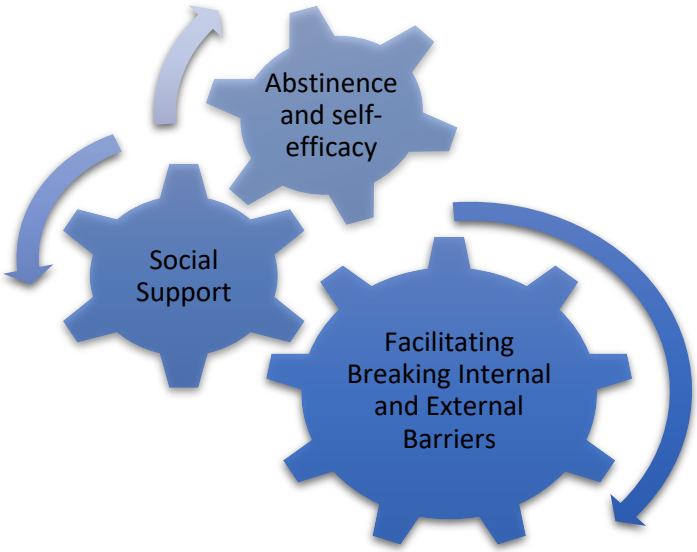


**Figure 1.4: External Barriers to Engagement**


**Figure 1.5: Key requirements for overcoming barriers**




Additionally, in a rare British study included in the review, Kaufman, Nielsen and Bowden-Jones (2017) identified barriers to engagement around inaccessibility of services and lack of knowledge, as well as the standard barriers of shame and stigma. There is some evidence that women-only groups may help to overcome these barriers.

# Section 4: Overall Conclusion and Emerging Themes

Overall, the literature review is limited by methodological limitations and paucity of research into key questions around indicated groups and their demand and need for gambling support services within a coherent system. There are particular limitations in research around the needs of particular sub-populations and this is urgent as the data suggest marked diversity in trajectories of harms and so likely points for intervention. As outlined above, there are data gaps around long-term outcomes that can provide information about recovery pathways for problem gamblers, and that allow identification of mechanisms of recovery that relate to different types and intensities of treatment. There is also a significant gap around 'treatment matching' where intensities of intervention are linked to severity of gambling problems and to complexity of life issues. Extending routine data collection around treatment to post-completion or discharge would also provide a form of ongoing support and early engagement.

This should be supplemented with in-depth qualitative work that attempts to engage with 'hidden' populations and identifies unmet needs in these cohorts. Finally, in this section, there is an important caveat which is around the predominance of studies that focus on problem gamblers in this review (with the exception of some of the epidemiological papers). We have little evidence around the needs of gamblers who do not meet this severity threshold (which is reasonably high) and it is hoped that the gradual transition of thinking from a criterion-driven approach to one based on harms (as advocated by Wardle and colleagues, 2018) will lead to a re-thinking of unmet needs. This will apply not only to specialist gambling treatment services but also to research that examines in more depth issues around integrated working to address broader life complexities as identified, for example, in the recent work by Sharman (2015; 2019) on gambling in homeless populations.

Nonetheless, there is a growing and consistent evidence base around barriers to treatment, at risk groups not engaging and clear need for services to be better integrated, to be more widely recognised and to offer effective pathways to individualised care. Services and interventions need to recognize both the internal and external barriers to help-seeking and the importance of denial, stigma and shame in preventing help-seeking.

The key message is that treatment is likely to be successful for those who engage with it and it is key to disseminate this message underpinned by the importance of the therapeutic relationship which is shown to improve engagement and retention. This is primarily a message of hope to people who are approaching a crisis point that there are interventions that will make a difference delivered by people who care. Overcoming skepticism about treatment and increasing the salience of treatment effectiveness messages may help to challenge despair and to support family members as well as gamblers themselves.

## Work package 2: Secondary Analysis

### 2.1 Summary of Main Points and Introduction

1) Of the general population that is known to be a problem gambler based on their DSM-IV scores, only a very small proportion engage with specialist gambling treatment (2.7% in 2016-17), and less than half of this group complete treatment;

2) The rate of engagement with treatment is considerably lower compared to people with a drug and alcohol issue (estimated penetration of 46%);

3) Older gamblers are more likely to complete treatment compared to younger age-groups;

4) Models of treatment engagement suggest that services should be encouraged to be more attractive to Black And Minority Ethnic (BAME) gamblers, younger gamblers aged under 35 years, gamblers experiencing personal relationship problems (e.g. relationship breakdown) and casino gamblers;

5) A preliminary taxonomy of treatment seekers generates four categories based on demographic characteristics, gambling behaviours and histories, and treatment responsiveness. This should form the basis for dedicated treatment pathways if these four groups are shown to be stable and robust with further empirical testing;

6) Each of the four segments should have a specialised 'marketing plan' to encourage engagement for gamblers not known to treatment – sports gamblers; heavy gamblers responsive to treatment; non-sport gamers; and female occasional gamblers;

7) Agency-level predictors of treatment completion show enhanced retention in residential gambling treatment compared to the National Problem Gambling Clinic and the GamCare network. This suggests differential treatment outcomes for gamblers across the national gambling treatment system;

8) Further work is required to enhance the robustness of the Data Reporting Framework (DRF) to improve coverage and robustness including data validation checks within existing data management processes.

## 2.1 Introduction

The aim of this chapter is to develop a narrative on treatment engagement based on secondary analysis of the Data Reporting Framework (DRF). The first part will examine the overall rates of treatment demand in the context of what is known about overall prevalence of gambling. Put another way, how many problem gamblers access specialist treatment? Here, the treatment process will be examined – the extent to which gamblers in treatment engage with the whole system, by mapping the process from initial assessment to discharge. The key research question is to understand the extent to which gamblers are engaged with treatment. We ask what factors are associated with continued engagement? Conversely, what variables correlate with attrition from treatment such that a problem gambler may drop-out?

A second component will be to look at the treatment population to answer two questions. Firstly, is the treated gambling population comprised of 'types' or segments of gamblers? This will help identify groups that may be missing from the treatment system. Secondly, what interventions can be shown to have a treatment effect? The gap analysis will need to consider which groups are not just missing from the gambling treatment system, but also which treatment interventions work well? Do some types of intervention lead to a stronger treatment effect than other? The chapter will conclude with suggestions for next steps.

### *2.1.1 Source of Data*

The DRF collects routine management information from treatment providers on the extent and nature of treatment demand for problem gambling (Rigbye & Jamieson, 2016). Data on treatment presentation are collected using the DRF at all stages of the treatment process from initial engagement to completion. Information on gamblers accessing treatment is collected by all treatment agencies funded by GambleAware (e.g. registers of treatment demand rather than being a survey based on sampling methodology). Input into the DRF is by the treatment staff themselves or by dedicated data entry staff such as data inputters within the provider agencies. Whilst it is expected that all people in treatment are recorded, there is no information on the extent of any under-reporting to the DRF (e.g. use of audit methodology to determine cases that should be reported but not recorded [false-negatives]). This should be borne in mind when interpreting the findings from this analysis. Treatment is defined as services who provide a face-to-face clinical (e.g. pharmacological) or psycho-social intervention. Services that provide anonymous advice services such as telephone helplines are not included in the dataset.

The DRF is structured using a relational database system across four linked tables (Rigbye & Jamieson, 2016). The first table collects information on the 'person'. This table includes the following:

- Gender (male, female and transgender)
- Age (derived from date of birth)
- Socio-economic indictors (Employed; Unemployed and Seeking Work; Students who are undertaking full (at least 16 hours per week) or part-time work (less than 16 hours per week) education or training and who are not working or actively seeking work; Long-

term sick or disabled, those who are receiving Incapacity Benefit, Income Support or both; or Employment and Support Allowance; Home-maker looking after the family or home and who are not working or actively seeking work; Not receiving benefits and who are not working or actively seeking work; In prison, in care, or seeking asylum; Unpaid voluntary work who are not working or actively seeking work; Retired; Not Stated (Person asked but declined to provide a response);

- Relationship Status (Divorced/Dissolved, Civil Partnership; Separated; Single; Widowed; In a relationship; Married/Civil partnership);
- Ethnicity using the full Office for National Statistics coding structure (White British; White Irish; White European; White Other; Black British: African; Black British: Caribbean; Black British: Other; Asian British: Bangladeshi; Asian British: Indian; Asian British: Pakistani; Asian British: Chinese; Asian British: Mixed: White and Asian; Mixed, White and Black African; Mixed: White and Black Caribbean; Mixed: Any other ethnic group);
- Whether the person has any additional diagnosis requiring specialist interventions (Yes – Pharmacological; Yes – Psychological; Yes – Both pharmacological and psychological; or None required).

This table is linked to a person's gambling behaviour and related history, including the impact of problematic gambling behaviours. These behaviours fall within eleven categories (Bookmakers; Bingo Hall; Casino; Live events; Adult Entertainment Centre (18+ Arcade); Family Entertainment Centre (Arcade); Pub gambling; Online gaming; Miscellaneous gambling; Private members club; Other undefined forms of gambling). Within each of these categories are further sub-categories of gambling that include horses; dogs; sports or other events; gaming machines; other undefined types of gambling. For casino gambling, there are specific sub-categories of poker, other card games and roulette. For adult entertainment, there is an additional category of skill prize machines. The miscellaneous category also includes any private or organised games; lottery; scratch-cards; football pools; and service station gambling. These are simply dichotomised into a 1=present or 0=no categorisation.

Further within this table are fields on whether the individual has (a) suffered a job loss through gambling; (b) whether there was a relationship loss through gambling; (c) whether the individual had an early big win from gambling (dichotomised into a 1=present or 0=no categorisation); (d) debt accrued due to gambling by financial groupings from no debt; under £5000; £5000 - £9,999; £10,000 - £14,999; £15,000 - £19,999; £20,000 - £99,999; £100,000 or more; Bankruptcy; In an IVA or the person does not enough the extent of gambling debt (other than there is debt); (e) Time spent gambling in the last month (30 days); (f) how long do you spend on average gambling on a gambling day?; (g) money spent gambling in terms of a daily average; (h) how much money is spent on average on a typical gambling day and (i) total amount of money spent per month on gambling.

Additional tables include details on referral pathways to and from the treatment agencies, and an appointment table that includes measurements of gambling severity (see below for more detail on these). The referral pathways include: GP; Health Visitors; other primary health care pathways; self-referral; carer; social services; education services; employers; criminal justice

pathways (police; courts; probation; prison; Court Liaison and Diversion Services); Independent Mental Health services; voluntary sector providers; Accident and Emergency Departments; Mental Health NHS services; Asylum Services; Drug misuse agencies; Jobcentre plus and any other undefined service or agency. Following on from referral into treatment, there is an indicator as to whether the referral has been accepted, and whether the person is a recurrent problem gambler, which is someone who may have had a previous treatment episode (dichotomised into a 1=yes or 0=no). The referral reason is also recorded including whether the person is a problem gambler or affected other, or a person seen by treatment staff as at risk of developing gambling problem.

Treatment progression throughout the system is recorded by an end reason categorisation that includes whether the person was offered an assessment but did not attend. The DRF uses two overarching categories to describe the treatment process using (a) assessment only e.g. whether the person was assessed only; considered not suitable for treatment; discharged by mutual agreement following advice and support; referred to another therapy service by mutual agreement; whether the person declined treatment; the person died following initial engagement; and (b) assessed and treated including whether treatment was completed; the person disengaged (defined as 'unscheduled discontinuation'); referred to another service or whether the person in treatment subsequently died.

The DRF also collects information on attendances (attended or cancelled) and the appointment purpose (for assessment; treatment; assessment and treatment; review only; review and treatment; and a follow-up appointment after treatment end). The medium for an appointment is also collected across face to face communications; telephone; web cameras (e.g. skype); online chat methods; email; short message service (SMS). The interventions provided include cognitive behavioural therapy; counselling; residential programme; brief advice; psychotherapy or any other form of support.

As the DRF is structured using relational tables it is possible to follow a person's time in treatment at three discrete points; (a) the point of initial assessment prior to engagement into treatment; (b) start of treatment and (c) treatment completion. The analysis below is structured to conform to this configuration. It should be noted that most variables are coded in nominal categories (e.g. male, female) and there are issues with the coverage of data collected (e.g. the extent of missing data) which will limit the validity of some of the findings. Data that have been used in this analysis included only those that reach >=70% coverage.

### *2.1.2 Treatment Penetration Estimates*

This component will examine the extent to which gamblers engage in specialist treatment services. The DRF available for this study comprises two years of treatment data from 2015-2016 (n=7759) and 2016-2017 (n=8147). These two years of data were merged into a single dataset to enhance the statistical power of the subsequent analysis. The first section will examine the overall treatment demand rate compared to national prevalence figures using recent figures for Great Britain in 2016 (NatCen, 2017).

The number of adult problem gamblers (PG) have been estimated using two screening methods, either the Diagnostic and Statistical Manual of Mental Disorders, Fourth Version (DSM-IV)[5] or the Problem Gambling Severity Index (PGSI)[6]. These different tools using different measurements to derive an estimate of the likely number of PGs.

In 2016-2017, using the DSM-IV definition of problem gambling, based on DRF data, 2.7% of problem gamblers had been treated (95% confidence interval [CI] of between 2.0 - 4.1%) compared to 3.5% (CI 2.3 – 5.1) of the national population using the PGSI. Overall, for 2016-2017 the treatment penetration rate using either the DSM-IV or the DSM-IV/PGSI was estimated to be 2.4% (1.8 – 3.3).

Table 2.1 presents information derived from the national survey of problem gambling (NatCen. Social Research, 2017) that establishes prevalence rates for England, Scotland and Wales which is equivalent to the treatment system presented in this chapter. The prevalence rates are derived from a household survey weighted by population. The extent to which PGs engage into treatment (defined as the 'penetration rate' of the number treated by the number estimated to a PG)

[5] The DSM-IV is the American Psychological Association official reference and archive tool for all mental health and behavioural disorders, is used as a standardized reference tool world-wide by health practitioners, and is revised every several years (https://www.psychiatry.org/psychiatrists/practice/dsm). A score of >=3 is considered indicative of problem gambling. The criteria included are:
The following are the diagnostic criteria from the DSM-IV for 312.31 (Pathological Gambling):
A. Persistent and recurrent maladaptive gambling behavior as indicated by at least five of the following: 1. is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble) 2. needs to gamble with increasing amounts of money in order to achieve the desired excitement 3. has repeated unsuccessful efforts to control, cut back, or stop gambling 4. is restless or irritable when attempting to cut down or stop gambling 5. gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression. 6. after losing money gambling, often returns another day in order to get even ("chasing" one's losses) 7. lies to family members, therapist, or others to conceal the extent of involvement with gambling 8. has committed illegal acts, such as forgery, fraud, theft, or embezzlement, in order to finance gambling 9. has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling 10. relies on others to provide money to relieve a desperate financial situation caused by gambling
B. The gambling behavior is not better accounted for by a Manic Episode (American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, D.C.).

[6] The Problem Gambling Severity Index (PGSI) is a standardized 9 question measuring tool used to measure the rate of risk for gambling related harm and the consequences experienced as a result of that harm. The PGSI is a 9-item self-report measure of problem gambling contained within the CGPI. Four items assess problem gambling behaviours (e.g., "How often have you bet more than you can afford to lose?") and five items assess adverse consequences of gambling (e.g., "How often has your gambling caused you any health problems, including stress or anxiety?"). Following convention, participants were classified into gambling subtypes based on their PGSI scores as follows: 0 = non-problem gambler; 1–2 = low risk gambler, 3–7 = moderate risk gambler, 8 and over = problem gambler. https://responsiblegambling.vic.gov.au/for-professionals/health-and-community-professionals/problem-gambling-severity-index-pgsi/). Holtgraves (2009) provided support for the single factor structure of the PGSI supporting the idea of both discriminant validity and internal consistency.

However, it should be noted that these figures provide a slightly misleading picture as it includes both those who were retained in treatment and those who dropped out at early stages as shown below in Table 22which is shown in the analysis below.

**Table 2.1: Overall estimated penetration into specialist treatment**

| Problem Gambling Measure | Population Estimate | Treatment Population 2015-2016 (n=7759) | Treatment Population 2016-2017 (n=8147) |
|---|---|---|---|
| DSM-IV | 290,000 | 2.7%<br>95% CI (1.9 – 3.9) | 2.8%<br>95% CI (2.0 – 4.1) |
| PGSI | 230,000 | 3.4%<br>95% CI (2.2 – 4.9) | 3.5%<br>95% CI (2.3 – 5.1) |
| Either DSM-IV or PGSI | 340,000 | 2.3%<br>95% CI (1.7 – 3.1) | 2.4%<br>95% CI (1.8 – 3.3) |

Comparing the numbers of PGs who are treated (e.g. enter and started a treatment programme), between 1-2% of the national population of problem gamblers were treated in either of the years assessed with less than 1% of the overall population completing treatment. This compares to the estimated penetration rate for drug addiction (opiate and/or crack-cocaine users) of 46%[7] as shown below in Table 2.2. Changes year-on-year were assessed for statistical significance. There was a statistically significant increase in the number of problem gamblers assessed ($\alpha^2$=17.2, $p<0.05$) and who initiated treatment from 2015-2016 to 2016-2017 ($\alpha^2$=65.9, $p<0.05$). There was also a slight increase in the number of problem gamblers who successfully completed treatment (as a proportion of those treated) although this difference was not statistically significant ($\alpha^2$=2.2, p=0.134).

[7] Calculated as 144,288 adults in treatment with an opiate and/or crack-cocaine (OCU) need in England (p19: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752993/AdultSubstanceMisuseStatisticsfromNDTMS2017-18.pdf as a proportion of 313,971 OCUs estimated within England https://www.gov.uk/government/publications/opiate-and-crack-cocaine-use-prevalence-estimates-for-local-populations

| Table 2.2: Overall estimated penetration into specialist treatment | | | | |
|---|---|---|---|---|
| **Treatment Status** | **2015-2016** | | **2016-2017** | |
| | Number/ Percentage | Rate Range* | Number/ Percentage | Rate Range* |
| Not assessed/treated | 3,502 (45.1%) | | 2,898 (35.6%) | |
| Assessed Only | 587 (7.6%) | | 766 (9.4%) | |
| Initiated Treatment | 3,670 (47.3%) | 1.1-1.3 | 4,483 (55.0%) | 1.3-1.6 |
| (of whom) Completed treatment** | 2,222 (60.5%) | 0.6-0.8 | 2,787 (62.2%) | 0.8-1.0 |
| Total Treatment Engagement Population | 7,759 (100.0%) | | 8,147 (100.0%) | |

**Estimated range comparing the population estimates using DSM-IV only and DSM-IV/PGSI*
*** Completed treatment as a proportion of treated population*

For 2015-2017, the penetration into treatment is shown by gender in Table 2.3

| Table 2.3: Penetration into treatment by gender, 2015-16 to 2016-2017 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **2015-2016** | | | | **2016-2017** | | | |
| | **Male** | | **Female** | | **Male** | | **Female** | |
| | **Number** | **(%)** | **Number** | **(%)** | **Number** | **(%)** | **Number** | **(%)** |
| **Not assessed** | **2,828** | **45.0** | **630** | **44.1** | **2,329** | **35.0** | **566** | **37.9** |
| **Assessed Only** | **507** | **8.1** | **77** | **5.4** | **658** | **9.9** | **108** | **7.2** |
| **Initiated treatment** | **2,947** | **46.9** | **722** | **50.5** | **3,665** | **55.1** | **818** | **54.8** |
| **(of whom) Completed Treatment*** | **1,723** | **58.5** | **499** | **69.1** | **2,250** | **61.4** | **537** | **65.6** |
| **Total Treatment Engagement Population** | **6,282** | **100.0** | **1,429** | **100.0** | **6,652** | **100.0** | **1,492** | **100.0** |

***Completed treatment as a proportion of treated population*

Completion of treatment rates generally improves as age increases reaching 80% for older age-ranges although caution is advised in the interpretation of this finding due to the relatively small numbers in each age-group (Tables 2.4-2.5). It should be noted that the number recorded in Table 2.4 will not add up exactly due to a small number of missing data (see footnote). It is of concern that in each of the years analysed, completion rates for young people aged under 25 years are lower than other age-ranges, although again there has been a slight improvement across the two years examined.

**Table 2.4: Penetration into treatment by age-range, 2015-16 to 2016-2017 (numbers)**

| | 16-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75+ |
|---|---|---|---|---|---|---|---|
| **(2015-2016)** | | | | | | | |
| **Not assessed** | **578** | **1473** | **686** | **391** | **158** | **40** | **7** |
| **Assessed Only** | **97** | **242** | **133** | **71** | **33** | **8** | **1** |
| **Treated** | **620** | **1438** | **861** | **468** | **195** | **50** | **5** |
| | | | | | | | |
| **Total Treatment Population** | **1295** | **3153** | **1680** | **930** | **386** | **98** | **13** |
| **Completed Treatment*** | **294** | **857** | **552** | **328** | **133** | **40** | **4** |
| | | | | | | | |
| **(2016-2017)** | | | | | | | |
| **Not assessed** | **463** | **1231** | **638** | **362** | **149** | **38** | **5** |
| **Assessed Only** | **121** | **354** | **164** | **75** | **36** | **7** | **2** |
| **Treated** | **669** | **1941** | **1036** | **543** | **214** | **66** | **10** |
| **Total Treatment Population** | **1253** | **3526** | **1838** | **980** | **399** | **111** | **17** |
| **(of whom) Completed Treatment*** | **367** | **1155** | **695** | **358** | **152** | **50** | **8** |

**Completed treatment as a proportion of treated population; † 156 missing records from the Total Treatment Population in 2015-2016 and 20 missing cases in 2016-2017.*

Table 2.5 shows penetration rates by age category:

| Table 2.5: Penetration into treatment by age-range, 2015-16 to 2016-2017 (percentage) | | | | | | |
|---|---|---|---|---|---|---|
| | 16-24 | 25-34 | 35-44 | 45-54 | 65-74 | 75+ |
| (2015-2016) | | | | | | |
| Not assessed | 45% | 47% | 41% | 42% | 41% | 54% |
| Assessed Only | 7% | 8% | 8% | 8% | 8% | 8% |
| Treated | 48% | 46% | 51% | 50% | 51% | 38% |
| Total Treatment Population | 100% | 100% | 100% | 100% | 100% | 100% |
| Completed Treatment* | 47% | 60% | 64% | 70% | 80% | 80% |
| (2016-2017) | | | | | | |
| Not assessed | 37% | 35% | 35% | 37% | 34% | 29% |
| Assessed Only | 10% | 10% | 9% | 8% | 6% | 12% |
| Treated | 53% | 55% | 56% | 55% | 59% | 59% |
| Total Treatment Population | 100% | 100% | 100% | 100% | 100% | 100% |
| Completed Treatment* | 55% | 60% | 67% | 66% | 76% | 80% |

**Completed treatment as a proportion of treated population*

Thus, there is a concern across both years that a high proportion of those who make some attempt to engage with treatment fail to initiate treatment and far less complete it, with this risk elevated for younger gambling help seekers. This suggests a significant issue with intake processes leading to high early drop-out rates that requires significant further investigation.

## 2.2 Modelling of the characteristics of those engaging with gambling treatment

To further understand the above findings, a second set of analyses were carried out to examine predictors of drop-out prior to treatment initiation and treatment completion (Table 2.6-2.8). A more detailed analysis was undertaken of the treatment processes discerned above (e.g. assessment only, treated and completed treatment). These variables were dichotomised into assessed only (versus not assessed-only), treated (versus not treated) and completed treated (versus not completing treatment) using a stepwise logistic regression in STATA. An initial

exploratory analysis tested for statistical significance on over 100 variables. It is not advised to include too many additional variables to avoid 'overfitting' (Gayat et al, 2002) whereby significance may occur by chance alone. Twenty prognostic variables were created that included demographic details (age, gender, ethnicity), social circumstances (employment status, relationship status e.g. single or married/in a relationship), gambling history or antecedents (whether a job or a relationship had been lost due to gambling, whether there was an early big win) and the nature of gambling (dichotomised into 'bookmakers'; 'bingo hall gamblers'; 'casino'; 'attends live events'; 'pub gamblers'; 'online gamblers'; 'private club gamblers' and 'miscellaneous other gamblers'). Additional variables such as year were tested for inclusion and were not statistically significant. The use of this approach was to further explore prognostics that are associated with gambling treatment outcomes, given the data that are available within the DRF. It should be noted as a caveat that the prognostics available in an observational study will be dependent on the data categories collected by the treatment providers (as well as the completion of the pro forma in each case). There will be other factors that will be associated with treatment engagement and completion that are described in this analysis. There are also biases associated with the medium of data collection, such that a treatment worker will collect this information from a client at the point of assessment or review. This may result in a client giving a socially desirable response to the worker (e.g. to please with clinician). Consequently, we suggest that these findings should be treated as indicative rather than definitive.

A logistic regression was run across the three treatment stages with a sample size of 7,398 for assessed and treated only and 10,459 for completed treatment. The statistically significant factors associated with each treatment stage were:

***Assessed Only***

**Table 2.6: Logistic regression model of prognostics associated with gamblers being assessed only, 2015-16 to 2016-2017 (combined)**

| Prognostic | Odds Ratio | P-Value | 95% Confidence Interval (CI) Upper/Lower | |
|---|---|---|---|---|
| **BAME** | **1.32** | **0.027** | **1.03** | **1.68** |
| **Did not lose a relationship due to gambling** | **1.27** | **0.046** | **1.00** | **1.61** |
| **Casino gamblers** | **1.41** | **0.038** | **1.02** | **1.96** |

What this means is that, the odds (known as Odds Ratio [OR]) of BAME person being assessed only is 1.31 times higher than non-BAME being assessed only. The odds of a person being assessed who did not lose a relationship are 1.27 times higher than someone who had lost a relationship due to gambling, and casino gamblers have 1.41 times greater odds of being assessed only than all other forms of gamblers. Therefore, for gamblers who were assessed only (Table 2.6), gamblers from ethnic backgrounds other than those who were white, those who did not lose a stable relationship and those whose gambling involved casino gambling were less

likely to engage in treatment following assessment. The focus switches to those who at least initiated treatment in Table 2.7:

| Table 2.7: Logistic regression model of prognostics associated with being treated during treatment, 2015-16 to 2016-2017 (combined) | | | | |
|---|---|---|---|---|
| **Prognostic** | **Odds Ratio** | **P-Value** | **95% Confidence Interval (CI) Upper/Lower** | |
| **White British** | **1.37** | **0.026** | **1.03** | **1.68** |
| **Did lose a relationship due to gambling** | **1.27** | **0.044** | **1.01** | **1.61** |
| **Not being a casino gambler** | **1.41** | **0.039** | **1.02** | **1.96** |

As above, this means there is an elevated likelihood of actually receiving treatment for White British people (by a factor of 1.37), for those who did lose a relationship (by a factor of 1.27 and for those whose gambling is not in casinos (by a factor of 1.41). For gamblers in treatment (Table 2.7), three of the same statistically significant factors were associated with being only assessed (that is, not progressing to a treatment programme) and being treated (that is, at least initiating a treatment programme irrespective of whether it is completed). For gamblers assessed only, the prognostics included being reported as White British, not in a relationship that was lost due to gambling and casino gamblers. Variables associated with being treated were shown to be the converse of the above, with White British gamblers, having lost a relationship due to gambling and not being a casino gambler. Table 2.8 examines predictors of treatment completion:

| Table 2.8: Logistic regression model of prognostics associated with gamblers completing treatment, 2015-16 to 2016-2017 (combined) | | | | |
|---|---|---|---|---|
| **Prognostic** | **Odds Ratio** | **P-Value** | **95% Confidence Interval (CI) Lower/Upper** | |
| **Aged 16-24 years** | **0.66** | **<0.0001** | **0.54** | **0.81** |
| **Aged 25-34 years** | **0.77** | **0.006** | **0.64** | **0.92** |
| **Employed** | **1.14** | **0.01** | **1.03** | **1.27** |
| **White British** | **1.34** | **<0.0001** | **1.20** | **1.50** |
| **Married/in a relationship** | **1.18** | **0.046** | **1.00** | **1.38** |
| **Did not lose a relationship due to gambling** | **1.13** | **0.01** | **1.03** | **1.25** |
| **Miscellaneous gambling profile** | **1.20** | **0.01** | **1.04** | **1.37** |

Younger people aged 16-24 had reduced odds (OR 0.66) of completing treatment than being aged 25 years and over, which was a similar finding for gamblers aged 25-34 (OR 0.77) . There were greater odds of completing treatment if the person was employed (OR 1.14) compared to not being employed; White British (OR 1.34) compared to not being White British; married or in a relationship (OR 1.18) compared to not being married or in a relationship; whether the person did not lose a relationship due to gambling (OR 1.13) compared to those who did and people who presented with a 'miscellaneous' gambling profile (OR 1.2) compared to other forms of gambling.

There were similarities comparing the assessment only and treated groups with gamblers who completed treatment (Table 2.8) in that being White British and not losing a relationship due to gambling were both also associated with treatment completion. Being married or in a relationship was also shown to be statistically significantly associated with treatment completion. Conversely, gamblers aged 16-24 and 25-34 were found to be less likely to complete treatment compared to other age groups. Overall, a hypothesis emerges that certain groups may be more likely to complete treatment including older, White British gamblers (who are more likely to be treated and complete treatment compared to non-White British gamblers) and those in stable relationships (e.g. in a marriage or a relationship).

**Summary:** Gaps for provision include making treatment accessible and attractive to:

1. Non-White British gamblers;
2. Younger gamblers aged under 35 years in order to complete treatment once engaged;
3. Retaining gamblers in treatment who may have lost a relationship (this group were more likely to be treated than gamblers who did not lose a relationship due to gambling, but were less likely to complete treatment once in service);
4. Casino gamblers.

## 2.3 Treatment Completion: Treatment Effect Estimation

The aim of this component is to derive a treatment effect estimation. In other words, whether different treatment arms can be seen to have a positive outcome compared to others. A two-year period of treatment data was amalgamated into a single data file. A total of 8,113 treatment episodes were created. As the majority of interventions are psychosocial in nature with little available information available in the DRF to differentiate them, three different "treatments" were created by agency name (Central and North West London [CNWL], GamCare [GC] and Gordon Moody [GM]). It should be noted that the main difference across treatment arms is the treatment setting. CNWL and GC are community-based interventions (for example, as an outpatient), and GM is a residential service. The differences in treatment including CNWL offering clinical interventions such as a pharmacotherapy in addition to psychosocial interventions, and there is an increased focus on provision of support for those with co-occurring psychiatric disorders. GC will provide psychosocial interventions-only, and the basic treatment package is around one-to-one counselling with a general emphasis on motivational interviewing and cognitive behavioural therapies. GM provide more intensive, residential services as an

inpatient service across two UK locations, based on a structured programme complemented by a peer-support provision that is akin to a Therapeutic Community.

A method for deriving a treatment effect was deployed using an inverse probability weighting with regression adjustment (IPWRA) method, which is considered the most robust of four available methods that support multivalued treatments (Linden et al, 2016). More detail on how the results are derived and the methodology is presented in the appendix. This approach compares treatment "arms" to show the efficacy of each "arm" in ensuring treatment completion. The approach applies weights to each participant so that each treatment arm compares similar profiles of service user in a 'like-for-like' comparison. This approach reduces selection bias effects – whereby one treatment arm may see a different type of service user compared to another (based on different characteristics such as socio-demographics, severity of need etc). The weighting minimises the difference between participants in the analysis. The weighted treatment arms can be shown to be more 'balanced' than hitherto (e.g. more comparable).

Balanced diagnostics and data on the absolute treatment effects are shown in the appendix. Relative risks are presented in Table 2.9.

**Table 2.9: Summary of Relative Risk by Lower and Upper Confidence Intervals**

| Contrast | Relative Risk | Lower Estimate | Upper Estimate |
|---|---|---|---|
| **GM v CNWL** | **1.45** | **1.15** | **1.84** |
| **GM v GC** | **1.32** | **1.24** | **1.41** |
| **GC v CNWL** | **1.10** | **0.88** | **1.38** |

Again using odds ratios (where a score of 1 is predicted and anything above that means greater likelihood by that multiplicate factor), Gordon Moody clients were 1.45 times more likely to complete treatment than CNWL clients, and 1.32 times more likely to complete treatment than GamCare clients. The marginal model estimates that shifting all subjects to treatment arm 'GM', the completion rate would be about 1.32 times that of 'GC' and 1.45 times that of 'CNWL'. There is a 95% chance that the confidence intervals simultaneously contain the true value of all three relative risks. Put another way, if all gamblers were placed into treatment 'GM', there would be an improvement of between 1.32 to 1.45 times the other services' treatment completion rate.

**Summary**

1. There are differential treatment outcomes across broad groupings of treatment in terms of completion of treatment following a weighting;
2. Enhanced outcomes were noted for Gordon Moody relative to other treatment "arms";
3. There is a need to understand why there are different treatment effects across the treatment arms.

There are two important caveats for this effect. The first is that treatment completion is a proxy for outcomes, and we do not have actual outcome data across the three modalities of treatment. Second, GM as a residential provider, provides a much more intensive form of intervention and so the comparison is not a 'like for like' assessment.

## 2.4 Segmentation of the gambling treatment population

The aim of this section is to establish whether the treatment population can be segmented into relevant populations. This will allow for a greater understanding of the 'type' of service user that accesses treatment and therefore provide pointers as who may be missing. More detail on the method used to undertake the segmentation is provided in the appendix.

Cluster Attributes: The following analysis examines the four segments by their attributes as recorded within the DRF. The clusters can be described as shown below:

**Figure 2.1: Initial breakdown of the four treatment type clusters**

| *Cluster 1: "Sports Gamblers" (4.3%)* | *Clusters 2: "Heavy Gamblers responsive to treatment" (37.0%)* | *Cluster 3: "Non-sport Gamers" (46.6%)* | *Cluster 4: "Female occasional gamblers" (12.1%)* |
|---|---|---|---|
| •More likely to gamble at "traditional" bookmakers and online sporting events, attend casinos in person to gamble at poker/cards and also attend live bingo or sporting events. This segment is likely to be male, employed, less likely to be in a relationship with a relatively low monthly spend. Likely to spend the longest time in treatment (more than four months) compared to the other segments. | •Male, White British, employed, evidence of a relationship loss due to gambling, reported an early big win, and high spend. | •More likely to gamble on gaming machines in bookmakers or casinos, likely to gamble on the lottery. Same demographics as Cluster 2 but more likely to demonstrate no change in treatment | •Female, older, less likely to be employed, in a relationship, gambling with a lower spend, less likely to be a problem gambler and less likely to gamble online. More likely to complete treatment. |

84% of all problem gamblers in treatment are located within two of the clusters. Cluster 3 ("non-sport gamers") form the largest cohort (46.6%) of the treated population and then "heavy gamblers responsive to treatment" (37.0%). Both these segments are likely to be male and White British, with the non-sport gamers likely to gamble alone at gaming machines and less likely to be responsive to treatment relative to the other segments. Female and occasional gamblers (cluster 4) are typically less problematic with a lower spend, and more likely to complete treatment. Cluster 1 ("Sports Gamblers") were the smallest cohort and more likely to gamble at

sports events. They are distinguished by being male, employed, and single with a relatively low monthly spend.

**Summary:** Four segments of gamblers emerge from the segmentation analysis.

1. Treatment should consider tailored and pathways/interventions for each segment;
2. Individual "non-sport gamers" are the largest cohort but least likely to do well in treatment creating a gap in service outcomes. Treatment should consider enhancing a response to this segment, and investigating the needs and treatment engagement processes of this group;
3. A 'marketing plan' for each segment should be developed to enhance access to treatment for those not known to services.

## 2.5: Conclusion for section 2

The secondary analysis of the DRF suggests that there are a number of gaps in service provision. The estimated penetration of problem gamblers into specialist treatment services is shown to be relatively low, when compared to related areas such as substance misuse. The low rates are in part due to the high prevalence of gambling across Great Britain. This suggests a need to enhance access to treatment for problem gamblers, and this is consistent with the findings in Sections 1 and 3 of this report.

Once in treatment, there are groups of gamblers that disengage throughout the treatment process from assessment to completion (discharge). Four groups emerge: Black and Minority Ethnic gamblers, younger people aged less than 35 years, individuals who experience relationship breakdown and casino gamblers. Services should be made more attractive and re-engagement methods should be considered to reduce attrition for these groups, and to rapidly re-engage those who do drop out.

A treatment effect estimation was provided that weighted service users across three of the main treatment "arms". Once service users were 'balanced' (comparing service users with similar characteristics), the residential model was shown to demonstrate enhanced outcomes (in terms of treatment completion) compared to the other approaches. This may be an expected result given the small caseload and intensive resourcing available, but further work is required in understanding what drives behavioural change and how this can be applied to other services. It is also recommended that this analysis is extended to longer time periods to examine changes over time.

A segmentation analysis identified four segments of 'types' of service user who are in treatment. Two broadly similar groups comprise most of the treatment demand "heavy gamblers (who are responsive to treatment)" and "non-sport gamers". These segments are likely to be White British, male heavy gamblers who report different outcomes once in treatment. "Female occasional gamblers" and "sports gamblers" emerge as the other two segments. Further empirical testing is recommended to ensure the robustness and validity of each segment (e.g. larger samples over

longer time periods). This allows for changes in engagement with treatment to be captured. It is recommended that specific pathways and interventions are developed for each segment. Moreover, each segment should be linked to a 'marketing plan' to enhance access for those gamblers not known to treatment.

The data used in this chapter was of variable quality. There is a need to establish mechanisms to improve data coverage, quality and robustness. Data validation checks should be incorporated into routine data management processes. Additional methodologies should be considered that examine the coverage of reporting to determine any potential under-reporting (e.g. auditing methodologies to examine whether all treated cases are reporting to the DRF).

Further analyses should be considered to supplement this interrogation of data following a data cleaning exercise. In addition, to enhance the modelling used in this study, further work could consider spatial mapping of the locations for provision of treatment alongside the distribution of service users based on an enhanced analysis using postcodes. This analysis could include the following components: service user density mapping visualised against treatment provision; proximity analysis using crow flies and drivetime analysis; and developing Wardle et al (2017) weighted modelling of problem gambling correlates at a national level.

## Work Package 3: Primary data collection – treatment site visits

### 3.1 Overview

In contrast to the systematic literature review and the secondary data analysis, the information presented in this chapter is based on original data collection.

The primary focus is on a series of site visits undertaken by the ACT Recovery team to gambling treatment service providers across England. The aim was to assess how treatment need is met at a locality level using multiple methods to engage with the following key populations:

A. Service managers;
B. Service staff;
C. Service users (including user representative groups);
D. Affected others;
E. Other key stakeholders (where they were identified by our link person in each agency).

As outlined below, a structured approach was used to collate the views of each population, with validated measurement tools supplemented with discussion forums where data were collected from semi-structured qualitative methods. The aim of the discussions was to assess how well needs are measured and met through processes of engagement, looking both at areas for improvement and also areas where there are important innovations around the effective engagement of service users and affected others

### 3.2 Methodology

In Table 3.1, the basic overview and origins of the structured measures is outlined and how they fit into the overall design of data collection.

**Table 3.1: Mixed Methodology**

| **Method** | Formulation and Implementation | Rationale | Input for Reporting |
|---|---|---|---|
| **Structured Quantitative Surveys** | In a partnership with Texas Christian University (TCU) we implemented approved and amended questionnaires to assess Organizational Behaviour, Systems at the Managerial, Staff, and Service user level | Internationally validated data collection tool for organizational assessment | Validated and evidence-based data collection tool to ensure principle of replicability |
| **Semi-Structured Interviews** | Semi-structured interviews were designed to enable participants to expand on the highly structured questionnaires and to highlight issues of importance to them. Topics were then discussed in | Perspective and insight on service provider and system strengths, gaps, and personal experiences that may otherwise not have been captured in the quantitative collection. | Primary qualitative data reporting and direct experience. |

| | | | |
|---|---|---|---|
| | hour long sessions with each group. | | |
| **Semi-Structured Client Interviews, Open Discussion and Online Forum Focus Groups** | Semi-structured interviews were designed for service users to expand on structured questionnaires. Open discussion formats based on topics from the questionnaires and further developed by: our project lead, clinical assessment lead, and expert by experience.<br><br>Online Forum Groups: submitted via GamCare's online help forum to increase service user and affected other participation | Designed for service users and affected others to expand on the questionnaire topics to provide insight and direct access to perspectives on national and internal service user needs, gaps in the system, and obstacles for both groups that may otherwise not have been captured solely through quantitative collection. | Primary qualitative data reporting and direct experience. |
| **Documentary Review** | Review of blank assessment, case planning, referral notes, discharge planning, staff monitoring and development, and any other relevant system management documents. | To assess documentation and data collection for key issues around safety, governance and effectiveness of assessment and engagement processes. This work was undertaken under the leadership of a clinical psychologist with considerable experience of working with specialist services | Reporting and Data Collection review |

## 3.3 Primary Data Collection

In a partnership with Texas Christian University's Institute of Behavioural Research, ACT recovery adapted three validated Organizational Readiness for Change (ORC) surveys that have been used to assess substance use service providers' engagement in evidence-based practice in the United States and the United Kingdom.

The Client Evaluation of Self and Treatment (CEST), Organizational Readiness for Change (ORC), and the Survey of Organizational Functioning (SOF) scales were also adapted and approved for use by TCU for evaluating the problem gambling treatment system in the United Kingdom. The surveys were distributed and completed by clients, managers, and staff during the site visits and collected upon completion. The highly structured questionnaires then provided segway for the semi-structured interviews to be conducted on each site visit with managers, staff, clients and affected others on strengths, gaps, and obstacles within the gambling related harm services system.

In the seven site visits that ACT Recovery completed with gambling treatment providers, the team conducted semi-structured interviews with managers, staff, key partners (when available), and service users that were engaged, or had engaged, with each provider. The interviews were semi-structured based on the highly structured format of the adapted TCU IBR questionnaires; interviews were then used to gain information about perspectives on facets of the gambling treatment system. Each group was interviewed individually and the rationale for each survey and interview group was implemented to gain a range of feedback to inform the research of a wrap-around stakeholder perspective that delivers specific needs to be addressed and recommendations on bridging gaps from those actively working within the current problem gambling treatment system.

Managers were interviewed to enable insight into overall operational strengths and gaps in both the national and local context that impact facilitating service delivery. Clinical and administrative staff were interviewed to gain important information: strengths, gaps, and obstacles in active service delivery to service users and affected others. Most importantly, service users and affected others were interviewed about their attitudes toward a range of topics that relate to satisfaction with communication, engagement, delivery, and recommendations for improvement.

We had a high degree of engagement from provider agencies with seven provider agencies participating:

**Figure 3.1: Agencies[8] participating in the site visits**


There were some challenges with data collection at sites with high levels of engagement with service managers and service staff, but much lower engagement and attendance from service users and affected others. In total, between both on-site and online collection, the final number of structured instruments completed were:

**Figure 3.2: Number of surveys completed**

| Managers ORC Survey | Treatment Staff SOF Survey | Client CEST Survey | Affected Other Adapted CEST |
|---|---|---|---|
| •9 | •27 | •39 | •12 |

Thus, there were a total of 87 participants in the site visit component of the needs analysis.

[8] The agencies include the National Problem Gambling Service based in London, primarily providing treatment for gamblers with co-occurring disorders; GamCare who provide specialist gambling treatment in the London region, as well as telephone and online support, and coordination of the regional network of treatment providers; ARA, Beacon Counselling Trust, BreakEven; Gordon Moody is that national residential gambling treatment provider; BetKnowMore is a peer-based gambling support service that is not funded through GambleAware

### *3.2.1 Responses from treatment staff*

Description of the staff population is provided in the table below:

**Table 3.2: Characteristics of treatment staff participating in the surveys**

| Staff Description* | Number | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 5 | 19% |
| Female | 19 | 70% |
| Other | 1 | 4% |
| **Age** | | |
| Average (mean) age | 48.2 years (22-68) | |
| **Ethnicity** | | |
| White British | 17 | 63% |
| **Experience in Gambling Area** | | |
| Less than one year | 7 | 26% |
| 1-3 years | 4 | 15% |
| 3-5 years | 2 | 7% |
| More than 5 years | 9 | 33% |
| **Time in Current Job** | | |
| Less than one year | 9 | 33% |
| 1-3 years | 3 | 11% |
| 3-5 years | 1 | 4% |
| More than 5 years | 8 | 30% |
| **Employment Status** | | |
| Full Time | 9 | 33% |
| Part-Time | 6 | 22% |

*Two surveys had no response to this section and some returns were incomplete across all questions asked

### *3.2.2 Staff perceptions*

The SOF instrument provides a general description of staff needs including the extent to which staff require guidance and continuing support (even if initially trained). All of these and subsequent questions are presented using a Likert Scale (1-5) with 1 strongly disagree; 2 – disagree; 3 – neutral or uncertain; 4 – agree; 5 – strongly agree. In other words, higher scores (greater agreement) represent greater perceived need in that domain. The key findings for staff around needs in the area of needs and engagement are outlined in the table below.

| Table 3.3: Staff requirements in relation to unmet needs | |
|---|---|
| **Staff Needs** | Mean Score |
| Assessing client needs | 3.30 |
| Using client assessments to guide clinical and treatment decisions | 3.39 |
| Using client assessments to document treatment effectiveness | 3.26 |
| Matching client needs with services | 3.17 |
| Increasing client participation in treatment | 3.26 |
| Improving rapport with clients | 3.30 |
| Improving client thinking and problem-solving skills | 3.35 |
| Improving behavioural management of clients | 3.43 |
| Improving cognitive focus of clients during group work | 3.35 |
| Identifying and using evidence-based practices | 3.36 |
| **Average Score for Part A** | 3.32 |

Staff perceptions on 'need' relating to further guidance and support are largely neutral, with most responses averaging around 3 (neutral or uncertain) or slightly above. There were slightly elevated levels of agreement around the need for additional support in providing behavioural management to clients and the overall perception is that some additional support is needed for staff to manage client needs but this is not urgent. The next core domain provides a description of Organisational Needs as shown in Table 3.4 below.

| Table 3.4: Staff perceptions of organizational needs | |
|---|---|
| **Staff Needs** | Mean Score |
| Defining its mission | 2.18 |
| Setting specific goals for improving services | 2.38 |
| Assigning or clarifying staff roles | 2.68 |
| Establishing accurate job descriptions | 2.52 |
| Evaluating job performance | 2.43 |
| Improving relations among staff | 2.43 |
| Improving communications among staff | 2.50 |
| Improving record keeping and information system | 2.84 |
| Improving billing/financial/accounting procedures | 2.44 |
| **Average Score for Part B** | 2.53 |

Here there is much clearer satisfaction with the overall organisational structure, with relatively low levels of perceived need for additional support as indicated in a lower overall rating of 2.53 out of five (higher scores represent greater perceived need). Generally, staff feel that there is clarity around the organizational mission and role clarity, around communication, staff cohesion and information management. The third section of the SOF examines staff perceptions on their training needs, and the overall ratings in this area are reported in Table 3.5 below:

| Table 3.5: Overall staff perceptions of training needs | |
|---|---|
| **Staff Needs** | Mean Score |
| Basic computer skills | 2.16 |
| Specialised computer systems | 2.81 |
| New methods/developments | 3.23 |
| New equipment or procedures | 2.80 |
| Maintaining/obtaining credentials | 2.88 |
| New laws or regulations | 3.48 |
| Management or supervisory responsibilities | 2.96 |
| **Average Score for Part C** | **2.90** |

Again the overall average of 2.9 out of 5 suggests that staff do not think that this is a priority or an issue on the whole, and they are satisfied with the support needs provided by their organisation. There are two domains that buck this trend with staff feeling that they need additional support around 'new methods/developments' [3.23] and 'new laws and regulations' [3.48]). This issue is picked up below in the qualitative component of the staff responses as outlined below.

The fourth section of the SOF examines staff pressures (Table 3.6) on service provision and shows that the trend is generally to the negative with the exception of pressures from 'people being served' [3.24] and 'funding agencies'[3.40] (responses that are neutral or uncertain). Thus, there is a perception that the internal supports are present but that the clients and funders are the sources of perceived pressure for staff. Overall the average of responses in this section was 2.93 suggesting they disagree that there are pressures on staff from the above list.

| Table 3.6 Staff Pressures | |
|---|---|
| Staff Pressures on Service Provision | Mean Score |
| People being served | 3.24 |
| Other staff members | 2.68 |
| Treatment supervisors or managers | 2.92 |
| Board members | 2.65 |
| Community groups | 2.77 |
| Funding agencies | 3.40 |
| Accreditation or licensing authorities | 2.83 |
| **Average Score for Part D** | **2.93** |

The final section of the SOF presents 'General Perceptions of Gambling Treatment Needs'. As shown in Table 3.7, there is generally positive endorsement by staff about their ability to measure and meet the needs of their clients:

| Table 3.7: Staff perceptions on meeting the needs of clients | |
|---|---|
| **Staff Needs** | Mean Score |
| This service is good at measuring the needs of new clients | 4.28 |
| This service is good at meeting the needs of new clients | 3.92 |
| This service can meet the demands of problem gamblers in our area | 3.68 |
| This service has enough qualified staff | 3.67 |
| This service is resourced sufficiently | 3.25 |
| We receive regular training | 3.92 |
| We receive regular supervision and support | 4.36 |
| We are able to link clients into other services they need | 3.96 |
| We do a good job in meeting the needs of affected others | 3.98 |
| We assess and manage client risk well | 4.36 |
| We respond to patient need by providing stepped care | 4.12 |
| **Average Score for Part E** | **3.96** |

***There is a very clear perception that gambling services in Great Britain are good at both measuring and meeting the needs of their clients, and around measuring risk.***

This is in keeping with the systematic literature review showing that when clients successfully engage in treatment, their experiences and outcomes are generally positive. There was also a positive response around linking clients into other services. This would indicate that treatment staff generally feel that their needs are being well met and that see themselves as in a strong position to meet the needs of their clients.

### *3.2.2 Staff perceptions – Discussion groups*

In the course of seven clinical site visits, ACT interviewed a total of 27 staff members that included: administrative staff, therapists, counselors, affected others' counsellors, and team leaders. The discussions were open and broad-ranging with staff largely echoing the positive impressions reported in the surveys about their ability to measure and meet needs. There was a clear commitment by all the staff to the important work they do with service users and they identified the following strengths of the current treatment delivery system:

1. Potential to provide a flexible service with relatively quick response time;
2. Commitment and experience of staff (including lived experience) was seen as a major strength;
3. Innovative programmes – although these varied markedly across participating sites in their areas of innovation – were regarded as a core strength of the delivery model, and this was also perceived to be a key feature of partnership working with a diverse range of partners;
4. Training and skills base of staff were seen as generally positive, although there were several expressions of need for 'more options' for treatment delivery including approaches to addressing mental health issues and 'different therapies' to address specific needs of people with gambling difficulties. Particular concerns related to perceived high level of

suicide risk and a tendency for a 'hidden problem' to result in 'a sudden crisis and dip in mental health'.

As the front line of gambling treatment delivery, the staff remain dedicated to reaching all service users, but expressed frustration toward the national and local commissioning structure and stated that the system does not allow the delivery of the best possible service for the following reasons:

A. Inflexibility of the delivery model and lack of adequate aftercare, and a concern was expressed about no adequate recovery model;
B. Not enough peer support and mutual aid but increasing interest in SMART Recovery;
C. Strong emphasis on individual sessions when group treatment approach could be used to complement and supplement this approach;
D. Lack of outreach and community engagement is seen as a major limitation to engaging populations in need, and inadequate wraparound services;
E. Not enough awareness raising of the risks and harms associated with gambling;
F. Lack of link to GPs and medical services (referrals and liaison) is a particular concern that provokes anxiety/frustration for staff as well as a reported lack of general awareness amongst GPs of problem gambling and lack of processes for information sharing;
G. No measures for basic standards of care;
H. Lack of services for women;
I. Lack of residential treatment places and 'few treatment possibilities between a few one-to-one sessions and rehab'.

There were similar sentiments about the obstacles that prevent staff from delivering the best service and these common core obstacles were identified throughout the site visits:

A. Stigma and shame;
B. Effective communication and collaboration within the sector and with partner agencies;
C. 8-12 sessions (as is standardly offered to ambulatory out-patients seen through the GamCare network, which is over 95% of all treatment cases as shown in Section 2), is not perceived to be sufficient and not suited to individualised client need;
D. Insufficient capacity to address all unmet need;
E. Inadequate geographic coverage;
F. There is seen to be a need to increase awareness among professionals including primary care and criminal justice;
G. Staff profile was reported to be 'white and female heavy';
H. Different treatment pathways exist – this presents challenges to finding agreement about basic standards of care;
I. As a ‘hidden problem’ - PG is less visible so there is less pressure to act/provide services.

### *3.2.3 Service user perceptions*

The method incorporated 22 responses from Survey Monkey (of which 11 were completed in full) and 15 completed by service users during site visits (an additional two surveys were returned virtually incomplete in visits) resulting in a total of 39 questionnaires started of which

26 were valid and complete returns. One of the concerns with the use of the online method was that a number of people initiated the survey but did not complete it. This analysis excludes responses from Affected Others which is a separate component of this study. The small sample (two agencies, GamCare and the CNWL clinic, were not able to provide any clients to participate in the client sessions) means that comparison with the treatment population in Chapter 2 is not possible.

The following table provides an overview of the basic sample characteristics of the 26 individuals who completed either the online or paper and pencil version of the service user perceptions questionnaire:

**Table 3.8: Demographic breakdown of service users (n=26)**

| **Demographics** | **Number** | **Percentage** |
|---|---|---|
| Male | 23 | 88.5 |
| Female | 3 | 11.5 |
| **TOTAL** | 26 | 100 |
| Average (mean) Age | 39.8 years | |
| White British | 23 | 88.5 |
| Mixed | 1 | 3.8 |
| Indian | 2 | 7.7 |
| **TOTAL** | 26 | 100.0 |

In other words, the sample was predominantly white and male and with an average age of 39.8 years that is broadly consistent with the DRF data. At the time of completing the survey, 69.2% of respondents (n=18) were not actively engaged with services. In response to a question about satisfaction with the assessment process, responses are provided in the following table:

| Table 3.9: Were you satisfied with the assessment process, n=26 | | |
|---|---|---|
| | **Number** | **Percentage** |
| Not at all | 0 | 0.0 |
| A little | 2 | 7.7 |
| Quite a lot | 6 | 23.1 |
| A lot | 12 | 46.2 |
| Missing | 6 | 23.1 |
| **TOTAL** | 26 | 100 |

69% of the respondents were satisfied ("quite a lot" or "a lot") with the assessment process with only two respondents (7.7%) stating "a little" satisfaction.

In terms of involvement with gambling, participants were asked about the previous 28 days and how much money they had spent on gambling, with an average total amount of £7,513.16. This is reflected in the perception of most participants that they frequently bet more than they could afford to lose (see Table 3.10). Table 3.10 also reports on experiences of betting with larger amounts of money to get the same feeling, trying to recoup losses, borrowing to gamble, and adverse effects of their gambling:

| Table 3.10: Gamblers' perspectives on the adverse effects of gambling, n=26 | | |
|---|---|---|
| | **Number** | **Percentage (%)** |
| **Have you bet more than you could really afford to lose?** | | |
| Never | 5 | 19.2 |
| Sometimes | 1 | 3.8 |
| Most of the time | 5 | 19.2 |
| Almost always | 15 | 57.7 |
| **Still thinking about the last 12 months, have you needed to gamble with larger amounts of money to get the same feeling of excitement?** | | |
| Never | 7 | 26.9 |

| | | |
|---|---|---|
| Sometimes | 5 | 19.2 |
| Most of the time | 6 | 23.1 |
| Almost always | 8 | 30.8 |
| **When you gambled, did you go back another day to try and win back the money you lost?** | | |
| Never | 3 | 11.5 |
| Sometimes | 0 | 0.0 |
| Most of the time | 10 | 38.5 |
| Almost always | 12 | 46.2 |
| Missing | 1 | 3.8 |
| **Have you borrowed money or sold anything to get money to gamble?** | | |
| Never | 4 | 15.4 |
| Sometimes | 3 | 11.5 |
| Most of the time | 6 | 23.1 |
| Almost always | 13 | 50.0 |
| **Have you felt that you might have a problem with gambling?** | | |
| Never | 2 | 7.7 |
| Sometimes | 1 | 3.8 |
| Most of the time | 5 | 19.2 |
| Almost always | 17 | 65.4 |
| Missing | 1 | 3.8 |
| **Has gambling caused you any health problems, including stress or anxiety?** | | |
| Never | 2 | 7.7 |
| Sometimes | 2 | 7.7 |
| Most of the time | 7 | 26.9 |

| | | |
|---|---|---|
| Almost always | 15 | 57.7 |
| **Have people criticised your betting or told you that you have a gambling problem, regardless of whether or not you thought it was true?** | | |
| Never | 5 | 19.2 |
| Sometimes | 7 | 26.9 |
| Most of the time | 9 | 34.6 |
| Almost always | 4 | 15.4 |
| Missing | 1 | 3.8 |
| **Has your gambling caused any financial problems for you or your household?** | | |
| Never | 2 | 7.7 |
| Sometimes | 1 | 3.8 |
| Most of the time | 7 | 26.9 |
| Almost always | 14 | 53.8 |
| Missing | 2 | 7.7 |
| **Have you felt guilty about the way you gamble or what happens when you gamble?** | | |
| Never | 2 | 7.7 |
| Sometimes | 6 | 23.1 |
| Most of the time | 3 | 11.5 |
| Almost always | 13 | 50.0 |
| Missing | 2 | 7.7 |

The above table demonstrates the range of negative problems or issues that have accrued to participants due to their gambling. Most participants reported high rates of adverse events caused by gambling, and two-thirds see their gambling as problematic. More than half reported significant financial problems as a result of their gambling and experienced adverse psychological wellbeing as a consequence. This is reflected in Figure 3.2 below, which provides an overview of the key issues faced by problem gamblers

**Figure 3.2: Issues facing respondents, n=26**

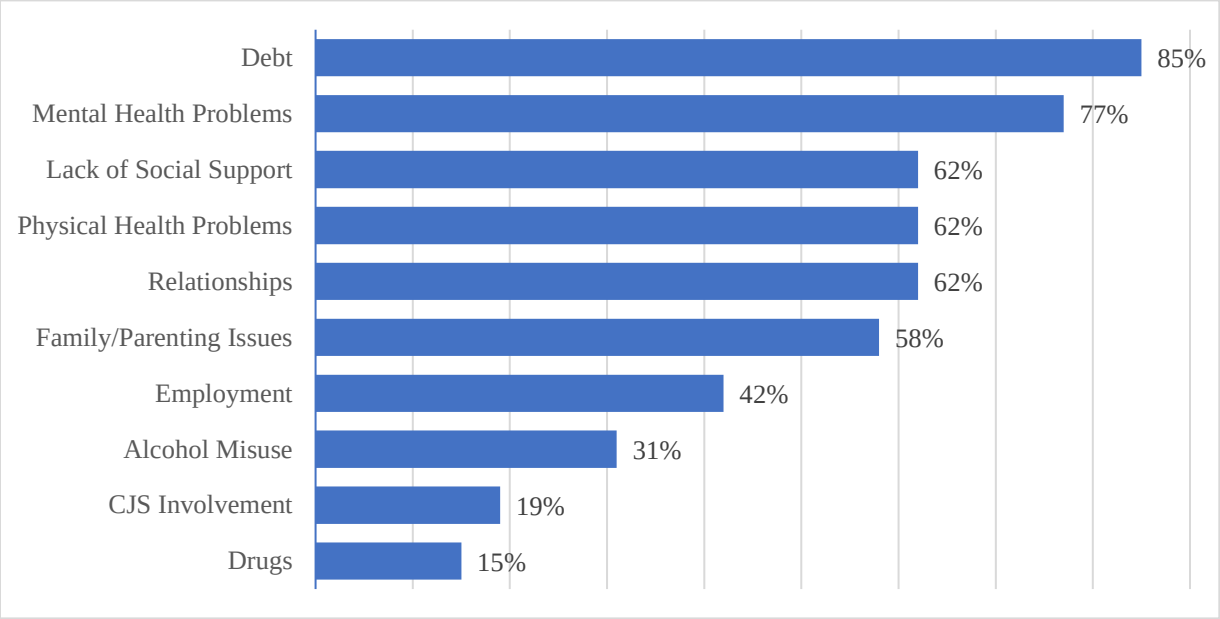



Figure 3.2 demonstrates the wide range of problems affecting service users with debt (85%) and mental health problems (77%) the most prevalent, but with a wide range of adverse effects experienced across the group, including isolation, physical health and relationship problems. We also measured strengths in the form of overall wellbeing in Table 3.11, in which key wellbeing factors are rated on a scale of 0-20 by participants, with higher scores reflecting greater wellbeing:

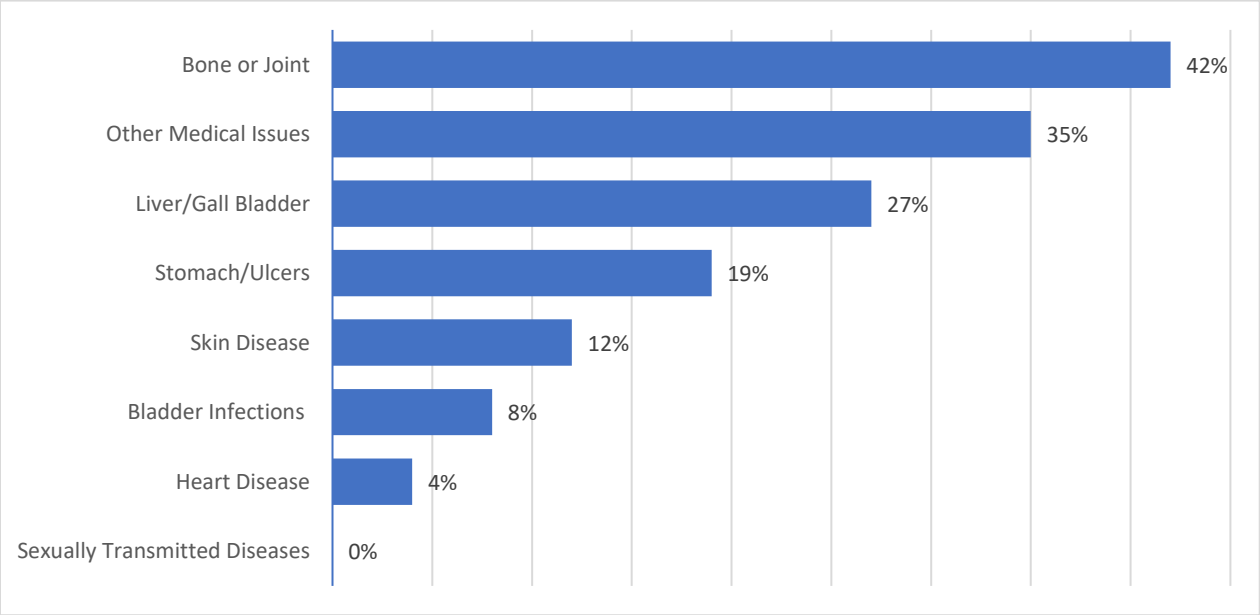
**Table 3.11: Average (mean) wellbeing and quality of life scores of participants, n=26**

| Attribute | Mean (average) |
|---|---|
| Psychological Health | 13.0 |
| Physical Health | 13.4 |
| Quality of Life | 14.1 |
| Accommodation | 14.4 |
| Support Network | 15.0 |

The respondents across a range of measures demonstrate above an average score (assuming at a score of 10 is a neutral score) reflecting the point at which they may be in the treatment process (that is, in or moving towards recovery). These scores would be consistent with populations of substance users in early treatment although they do suggest generally positive satisfaction with the support networks available to them.

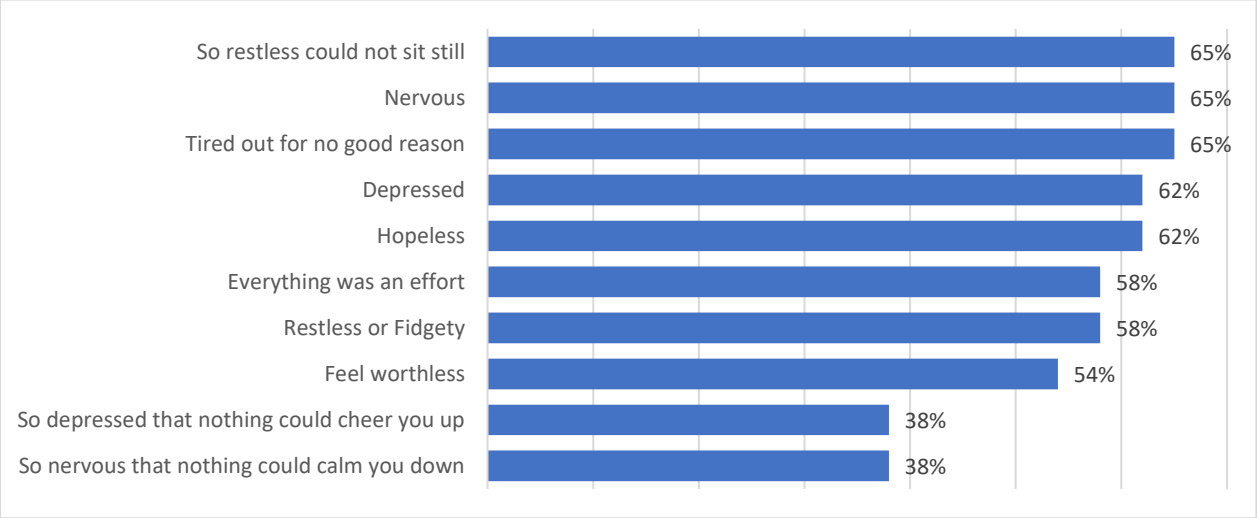
***What is clear from our service user respondents is that, as shown in Figure 3.3 and 3.4, there are significant physical and psychological co-morbidities that need to be addressed as part of a comprehensive and recovery-oriented package of gambling treatment.***

**Figure 3.3: Description of Medical issues (n=26)**



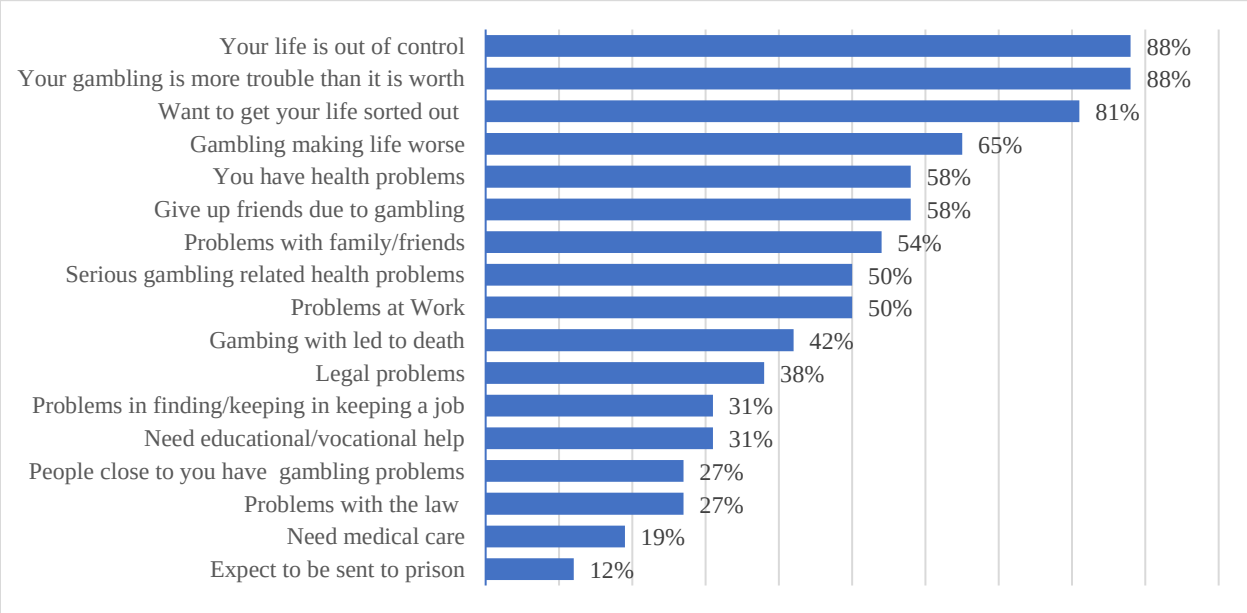

The main issues facing service users are that they report bone or joint problems (42%), 'other medical issues' (35%) and liver/gall bladder problems (27%), but all of these are reported at rates significantly in excess of what would be expected in the general population. Figure 3.4 reports on the psychological health profile of the sample:

**Figure 3.4: Psychological health issues, n=26**



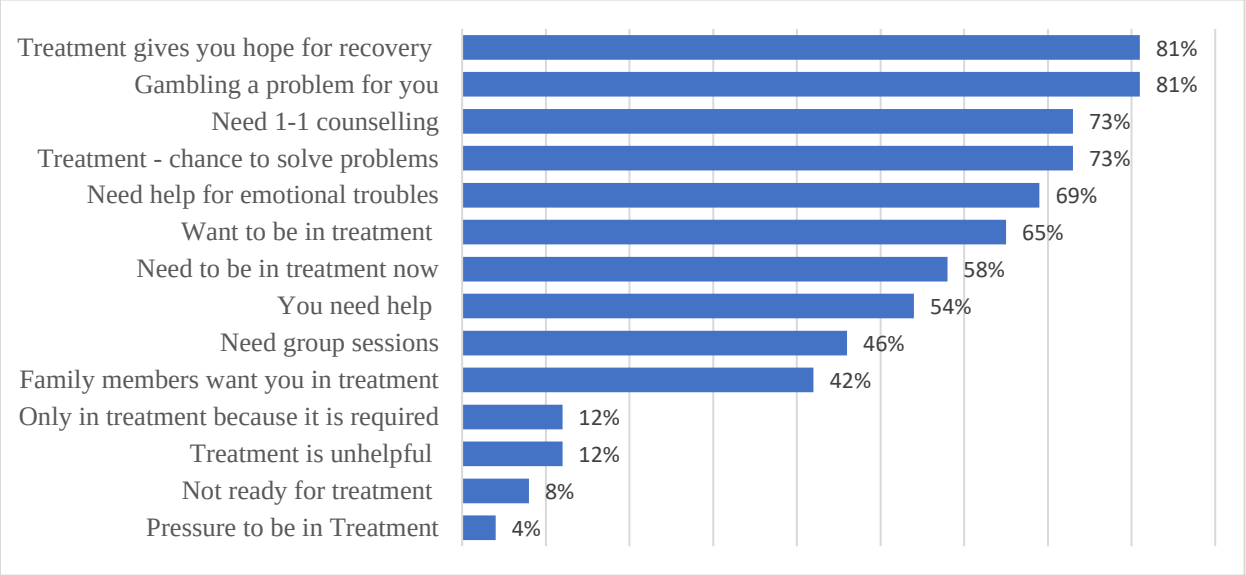

Around two-thirds of respondents report a range of symptoms of psychological distress, most commonly restlessness, anxiety, depression and hopelessness, and this profile is reflected in their perceptions of loss of control and the seriousness of their gambling problems (see Figure 3.5).

**Figure 3.5: Perceptions of gambling problems and consequences, n=26**




***There is a strong sense of a loss of control over life and a need to do something about this with gambling seen as more trouble than it is worth and a recognition that it has caused problems in a range of domains.***

**Figure 3.6: Perceptions from service users, n=26**

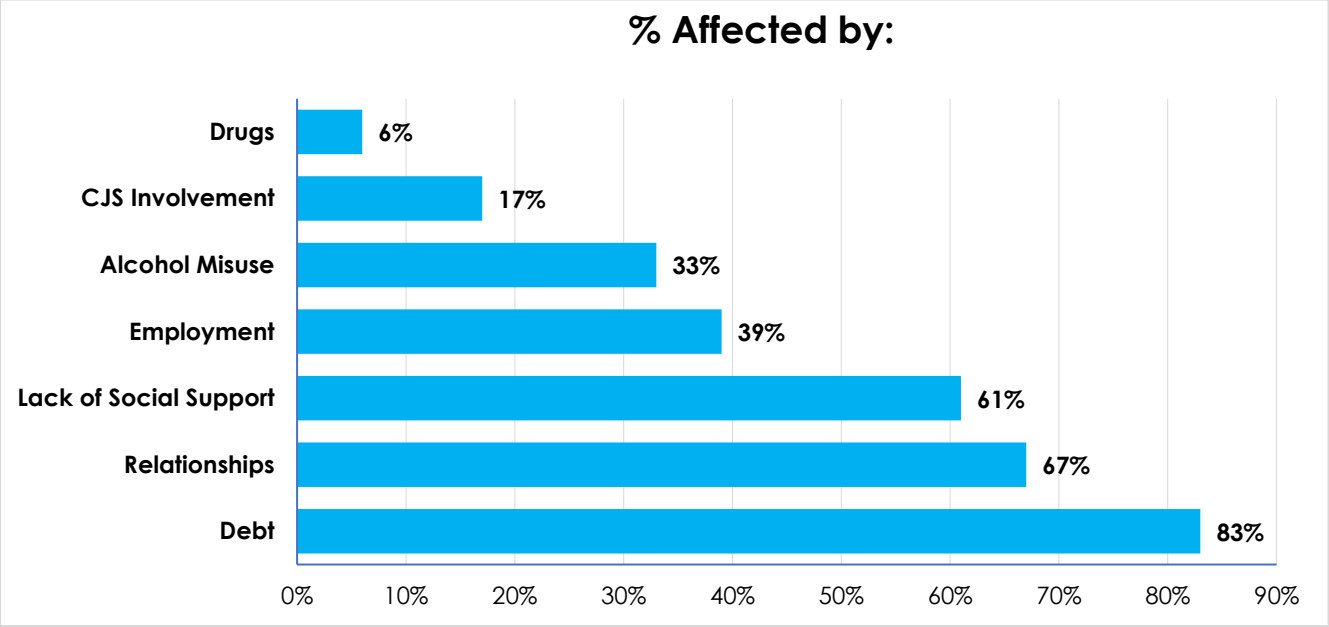



***Respondents are generally positive about the role of treatment to solve problems (73%) or to give some hope for a future recovery (81%). One-to-one counselling is preferred (73%) to group support (46%), and there is a recognition among service users that their need for support extends beyond the direct effects of gambling.***

### *3.2.4 Client perceptions from focus groups*

Over the seven visits ACT interviewed 18 clients from ARA, BetKnowMore, Beacon Counselling Trust, BreakEven, Gordon Moody. These interviews were conducted by our Expert by Experience lead Stephen Youdell and took place through one to one, telephone, or group interview settings during the site visits. Figure 3.7 provides an overview of the areas of adverse impact experienced by our focus group participants.

**Figure 3.7: Client participant problem profile from focus groups**




Service users were interviewed on four major topics: their current perspective of the gambling treatment services, barriers to services, perspectives on prevention, additional service needs and the current gambling industry. Service users' current perspectives on the treatment experience and pathways to treatment were that treatment itself is good but not sufficient and that treatment works if it can be accessed. Service User barriers to recovery and services were identified as:

1. ***Lack of knowledge and awareness, including self-awareness about problem gambling;***
2. ***The stigma and shame surrounding problem gambling;***
3. ***The ability to identify the nature of the problem;***
4. ***Awareness about where to access services.***

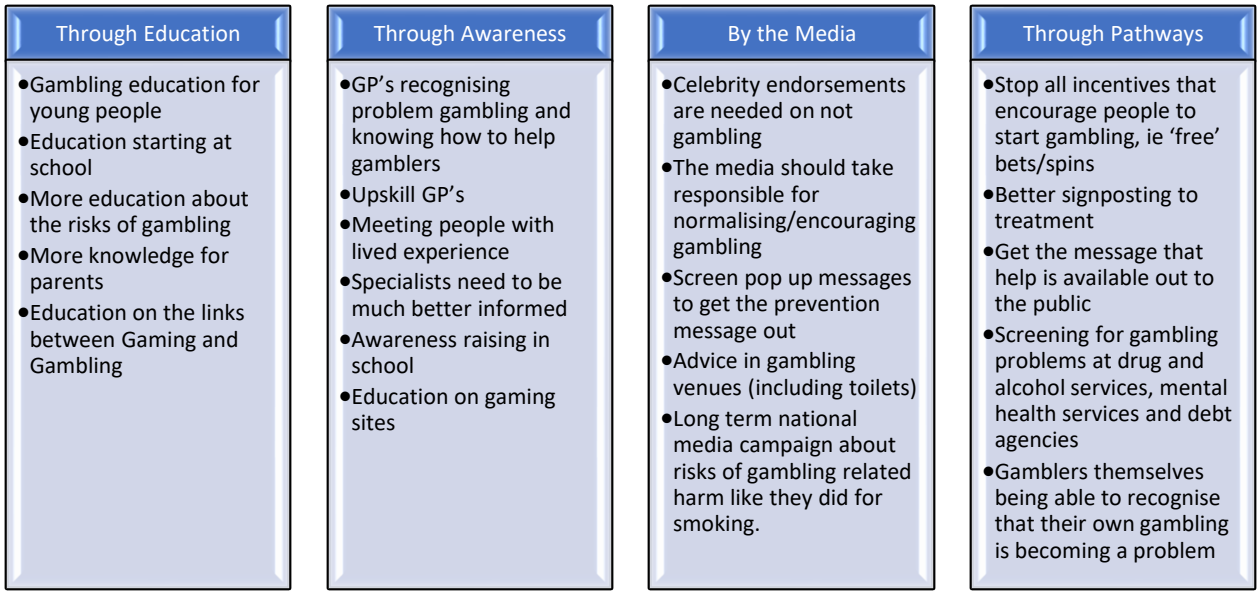
**How services view clients:** An important theme that was discussed was their perspective compared with what they saw as the system's perspective on the profile of the problem gambler. Service users felt that the services' profile of the service user is incorrect and too narrow and so are not as effective as they could be. They argued that:

1. Gamblers do not fit the typical profile of 'addicts' and that treatment services need to be developed with this in mind;
2. Gamblers don't always have other addictive behaviours;
3. Gambling problems are hidden (enabled by the on-line nature);
4. Problematic gambling is kept secret and gamblers are often high functioning individuals in other areas of their lives leading to problem gamblers leading double lives;
5. Gamblers only look for help when it is too late - "I only asked for help when I hit rock bottom";

6. Gamblers don't understand the risks of gambling and problem gamblers are getting younger;
7. Behaviours around gaming and gambling are very similar, but today's gambling addicts are different from in years past;
8. Gamblers in prison aren't getting help;
9. The intensity and pace of gambling products are causing a more rapid decline into serious problem gambling and you can develop mental health problems which cover up your gambling problem.

With the above profile in mind, service users had a diverse and comprehensive perspective on what is needed to close the national and local awareness gap and prevention needs for problem gambling and access to treatment services. These perspectives and programs are outlined in the figure below:

**Figure 3.8: Perceived needs**

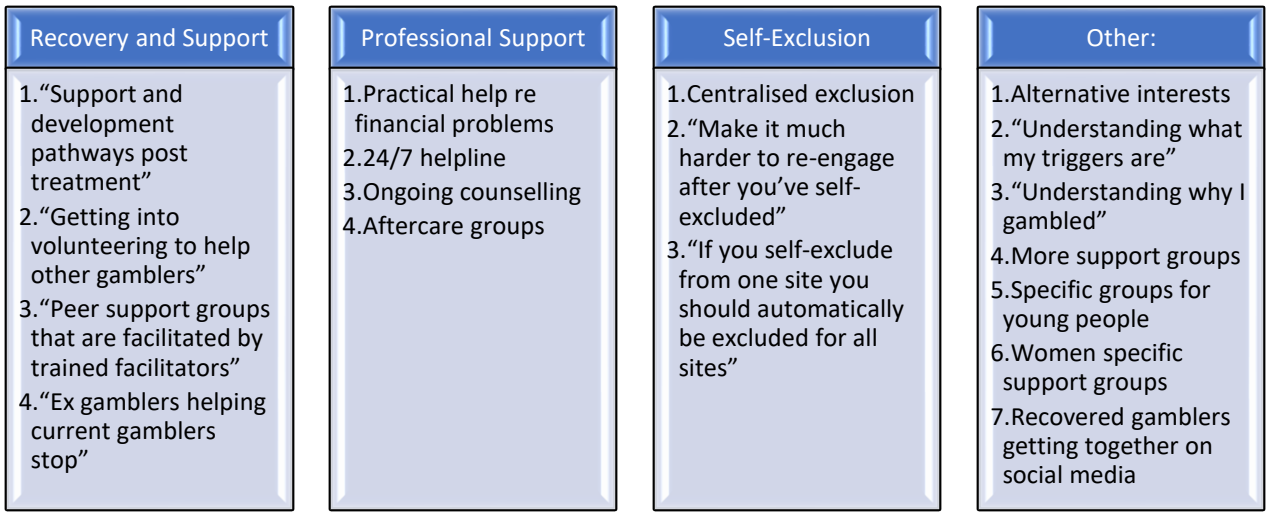



Although it was not part of our remit, a number of participants wanted to express their views about the industry who they felt were inadequately regulated. This included targeting people who had self-excluded, the provision of incentives to gamble, and avoiding the use of celebrities to promote gambling.

There was also a clear demand for improvement in both aftercare provision – and the feeling that services offered insufficient extensity and range of services – and the importance of developing peer-based service provision. The example of the Gambling North West Harms Alliance (GNHWA) was seen as crucial in this respect. GNHWA is a peer support group that has grown from service user representation and advocacy at Beacon Counselling Trust. It is not aligned to a particular recovery philosophy (like Gamblers Anonymous) and operates independently of the treatment provider to engage in community awareness raising, early engagement and linkage to treatment and ongoing community recovery support.

Service users also expressed the need for the following additional services to be provided to expand access and awareness for sustained recovery:

**Figure 3.9: Service users' perceived needs for additional support**




The aftercare comment above links to the perceived need for improved pathways into treatment, wraparound support when there and ongoing continuity of care and support after people complete treatment.

There was also a concern that the needs of particular groups were not adequately met including the needs of women (confirming the findings of the systematic review) and of young people (confirming the findings of the secondary analysis).

### *3.2.4 Affected Others*

The findings are restricted by a small number of respondents (n=12) with large amounts of missing data; caution is advised in the interpretation of these findings. From the structured data we collected, most respondents were female (n=7); the mean respondent age was 50.4 years; among the primary concerns was the impact of the gambler on their physical and mental health; and the importance and willingness to engage with support groups and online services.

As with service users, this group also consistently expressed concerns at what they perceived to be limited and ineffective regulation of the gambling industry in Great Britain. The following quote emerged from the online survey which was worth including in full as it described the views of many respondents:

*"My son committed suicide. It was a gambling related suicide. My life and that of my family and [his] friends are all damaged by what happened to him. There were 300 people at [his] funeral I think all of them were impacted or harmed by gambling. Some of these people may develop*

*mental health problems in the future and very little will ever be known that it has stemmed from gambling problems of someone they lived [with]. My mother has been devastated by [his] death, her health is now so poor that I have to look after her as a full-time carer. This is another impact on me caused by gambling. There is no support for families like mine, in the end I joined other families with the same experience and they are my support system. It is a lonely place. He was my only child."*

A total of six affected others were interviewed in one-to-one in-depth interviews throughout the course of the research. Affected others were the most outspoken about the lack of awareness and availability of services for not only their loved ones suffering from gambling related harms but also for themselves. The main findings from affected others about treatment pathways were:

1. "You have to find your own help"
2. "Professionals don't know how to help you"
3. "1:1 counselling, but that is limited"
4. "Family members don't have professionals they can go to"
5. "Family members or professionals don't have the confidence to talk to the gambler about seeking help"
6. "Families don't know what signs to look out for"
7. "Wider awareness of what help is out there"
8. "Wider public information needed for family and friends"
9. "Specialists that families may turn to need to be much better informed"

The affected others were consistent in their views with both service users and professionals about the need for greater awareness of both gambling harms and of ways to seek help, but were particularly concerned about the lack of professional support for family members.

## 3.4 Interviews with service managers

In the course of seven clinical site visits, we interviewed a total of ten senior managers including three Chief Executive Officers, one Chief Operations Officer, one Chief Financial Officer, and five service managers. This group were generally our key contacts in the agencies involved and were highly supportive of our work.

The interviews lasted from approximately one hour to three hours and covered a range of semi-structured questions about pathways, programs, strengths, gaps and obstacles of the national and local gambling treatment service system. In addition to the qualitative interviews ACT distributed questionnaires and the following figure shows the primary description statistics from seven of the managers who participated:

| Table 3.12 Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| How Many Years in Treatment Field | 7 | 1 | 20 | 8.43 | 8.62 |
| How Many Years at this Service | 7 | 1 | 20 | 8.80 | 8.32 |
| How Many Years in Current Role | 6 | 1 | 20 | 4.60 | 7.60 |

In other words, the managers generally had considerable experience in working in the gambling field with much of the time in their current roles.

| Table 3.13: Perceptions of Change | | |
|---|---|---|
| **Change in Field** | N | |
| Treatment Caseload | 6 | 67% say it is increasing |
| Treatment Budget | 5 | 56% say it has increased |
| Technology for service and clinical management | 4 | 44% say it has increased |

There was a general perception of growth and development in the field with a perception of growing caseloads, increasing treatment budgets and improvements in technology.

The commissioning and funding arrangements for the seven service providers differed in significant respects. Six are commissioned by GambleAware as part of the National Gambling Treatment Service (NGTS), including GamCare and three agencies who are part of the GamCare network. BetKnowMore (BKM), the seventh provider, operates independently as a company limited by guarantee. GamCare has a pivotal role within the NGTS as it is commissioned to operate the National Gambling Helpline, it also delivers face-to-face treatment and works as 'lead provider' with a network of fourteen partner agencies to deliver direct treatment across England, Scotland and Wales. Site visits included GamCare and three partner agencies (ARA covering Bristol, Gloucestershire, Newport, North Somerset, Wales; Breakeven covering Kent, Sussex, Essex, Cambridgeshire, Norfolk, Suffolk, Lincolnshire and Beacon Counselling Trust covering Liverpool, Wigan and the North West, including Greater Manchester).

Due to the differing organisational context of services, the material provided by managers is discussed in relation to differing operating frameworks before identifying common themes identified across providers.

### *3.3.1 GamCare and Partners: Managers' perceptions*

As lead provider, GamCare reported a range of activities related to quality assurance and governance for its own processes and those of partners. This included monthly meetings with partners concerning contracts and performance management, monitoring through quarterly quality assurance reports (including serious incident management) and Key Performance Indicator (KPI) reporting relating to treatment targets agreed with GambleAware. GamCare managers reported a primary role of 'ensuring treatment consistency'. They described the service network as 'different partners with different situations' identifying one of their core tasks as ensuring 'provision of core components everywhere'. The partner network is seen as having developed 'organically' and 'not a homogeneous group' which presents challenges: '*Some are big organisations, some are small, for some gambling is their main business, not for others'*.

However, this has allowed development of services matched to the local context, including taking opportunities to develop innovative approaches.

Partners provided samples of documentation developed to meet care and governance standards specified by GamCare. These included policies demonstrating well-developed risk management approaches across partner organisations and safeguarding policies for protection of vulnerable adults and working with children and young people. GamCare reported conducting an 'external safeguarding review' involving the auditing of all partners and work to develop an 'integrated safeguarding framework'. One example of good practice is inclusion of government guidance setting out a strengths-based approach to working with families. However, the clinical psychologist who worked as part of the project team, Dr Ruth Rushton, reported a generally high standard of documentation and process around risk assessment, governance and client wellbeing.

GamCare managers reported introducing a new 'model of care' 18 months prior to the needs assessment. They described the model as 'evidence-based' and founded on 'the principles of recovery, CBT, and involving family members'. Training linked to this has been delivered to all partners using direct sessions and a 'train the trainer' methodology. GamCare provides manuals and training updates.

Service managers expressed their appreciation that there was a standard training approach as it enabled provision of a consistent core service across geographical regions and supported provision of consistent treatment by a staff group characterised by varying levels of experience and a range of qualifications. All partner services use standardised screening measures (Problem Gambling Severity Index – PGSI and Clinical Outcomes in Routine Evaluation – CORE-10[9]). In line with this, GamCare provide a structured template for recording information, including client gambling activity, co-occurring problems and treatment goals. Some partners provided examples of visual aids/flow charts to guide severity-based, stepped-care treatment decisions. One partner stated that they 'shared new information and research informally'. They described a commitment

[9] The CORE-10 is a 10-item mental health screening tool. Items cover anxiety (2 items), depression (2 items), trauma (1 item), physical problems (1 item) functioning (3 items - day to day, close relationships, social relationships) and risk to self (1 item). The measure has 6 high intensity/severity and 4 low intensity/severity items. The scale has acceptable psychometric properties

to delivering 'evidence-based treatment', saying 'there's not much from GamCare and this would be helpful'.

GamCare and their partner services described a need to develop ‘a wider treatment offer’ including a greater emphasis on peer support and aftercare. Services emphasised the need for a prevention focus and support for awareness raising work, for example, ARA described sessions in schools, police services, universities and housing agencies.

One GamCare network manager said, *'we need community connectors and to get people in earlier'*. Strengths were identified by all managers about the ability to maintain a flexible approach to client consultations through use of phone/Skype which allows for waiting list management and needs matching for service users. Some providers described little or no waiting times, for example one service has developed an 'on-call' staff system and utilises on-line technology to provide an accessible service without waiting times. Other services reported waiting times of several weeks to access counselling following an assessment. The development of innovation was reliant on individual agencies and there was a sense of considerable variation in provision across the country.

Frustration was expressed about a treatment system focused on delivery of a fixed number of one-to-one sessions (8-12) rather than having flexibility to deliver treatment episodes according to ‘need’ (in services within the GamCare network). This is a view consistent with that expressed by treatment staff and service users. This was experienced as inflexible, sometimes resulting in less than optimal client care. One manager said, ‘*Funding is based on the CBT KPIs; rewarding the recovery and community services is not built into this’*. No written materials were provided that indicated formal agreements relating to co-operation with other stakeholders/community organisations further highlighting this as an area for development.

GamCare described aspirations to develop greater provision in their own and partner services, including SMART Recovery groups, but said ‘*there has not been capacity with the funding provided through GambleAware’*. GamCare also described ambitions to implement Social Behaviour and Network Therapy (SBNT), more group work and a stronger focus on ‘mental health and recovery’. The comments of managers from partner services mirrored this assessment pointing to the need for a social network treatment focus, attention to mental health co-morbidity and explicit wraparound care. There is a recognition that this is a rapidly changing and evolving field and that needs of the clients (and their diversity) will require services to be adaptable in their responses.

A particular concern across agencies was linking with GPs and mental health teams. One manager said, *‘It’s hard to link with GPs – they are working under such pressure and they don’t really appreciate the gambling problem. And we can’t refer directly into Community Mental Health Teams (CMHTs)/mental health services.*’ This was seen as the most pressing but by no means the only issue around inter-agency working.

Other treatment needs highlighted related to perceptions of low rates of returning clients, clients who ‘*tend to do well more quickly but can dip then present in a crisi*s’ and clients who ‘*tend to have more recovery capital’* but present with high problem severity. In general managers

highlighted a need to develop approaches tailored to respond to particular characteristics presented by problem gamblers, and have the capacity to be flexible in this delivery model.

All services provided examples of written information for clients, including obtaining consent, information about services and aftercare. For example, ARA provide a document for clients on 'protection of vulnerable adults' and BreakEven have a client information sheet signposting to a range of services including national debt line, Gam-Anon and Gamblers Anonymous (GA). Services also provided examples of written statements provided to clients on confidentiality and data retention. All services provided client satisfaction questionnaires although managers acknowledged the desire to incorporate client feedback in a more formal way. Such documents and the verbal report of managers gives strong evidence of respect for patient information and confidentiality. The project clinical lead (Dr Rushton) was generally extremely positive about the quality of safety and governance in both documentation and the underlying procedures and felt that the ability to meet needs from a risk and governance perspective was universally positive.

As part of this approach, GamCare stressed the importance of ongoing support for clinical staff through regular supervision. All partners provided policy documents and described arrangements for providing supervision. The manual of one agency specifies supervision in line with British Association for Counselling and Psychotherapy (BACP) (2018) Ethical Framework for Good Practice and includes a supervision contract for supervisee and supervisor. This represents best practice. In some services supervision is provided by line managers although this is not recognised as an effective arrangement. Managers did not describe processes to formally incorporate staff concerns and/or ideas about service delivery and development. Managers emphasised a commitment to providing flexible working arrangements for staff, seeing benefits for individuals and the organisation. In general all those interviewed described a dedicated and committed workforce, and managers reflected the staff view (and that of clients) that services were clear about their mission, goals and capabilities.

### *3.3.2 BetKnowMore (BKM)*

BKM operates as an independent company currently funded by grant/funding providers, such as Big Lottery and Trust for London. Income is also generated by providing training and support services to other organisations in different sectors.

In general, BKM managers described equivalent quality assurance and governance processes to the those of GamCare and its partners. Managers reported providing tailored training for peer mentors and regular supervision for staff. Peer mentors were described as diligent and steadfast. Supporting evidence was provided in the form of policy and procedure documents. BKM is also involved in work with GamCare to develop an '*innovative peer aid project'* which will '*provide peer support for clients before during and after treatment*', including SMART Recovery. GamCare described this as '*a pathfinder pilot starting in London with a view to going out nationally*'.

BKM provided some examples of good practice that differed from or extended that described by GamCare and partners:

- A 'Client Charter' including confidentiality assurance, complaint process;

- Mental health screening: an additional brief screen (in addition to PGSI and CORE-10) for anxiety problems (GAD-7);
- Additional assessment tools including a 'qualitative' assessment for clients;
- A visual assessment tool based on the PGSI that aids client engagement (see below);
- Partnering with other agencies. For example, collaborating with a housing agency involving negotiating use of space for client consultations giving a joint benefit of resource management and stronger inter-agency links.

Strengths in the system were identified by all managers in the ability to maintain a flexible approach to client consultations through use of phone/Skype which allows for effective waiting list management and needs matching for service users which results in accessible services with little to no waiting times. All were agreed on the dedicated and committed workforce and services described efforts to support staff with training, supervision and flexible working arrangements.

### *3.3.3 General Conclusions – Manager Perspective*

In general, the services visited provided evidence of sound care and governance procedures including written and ratified policies in core areas of activity and risk management, clear arrangements for accountability within the organisation and effective and appropriate leadership. Services demonstrated a systematic and planned approach to screening and treatment decisions matched to need, supported by structured recording of assessment information and treatment activity. There is a clear sense of mission and a strong commitment to effective regulation and governance and the managers reflected the views of their staff (and clients) demonstrating a strong sense of commitment and a belief in their effectiveness largely borne out by the evidence base and by the observations of the needs assessment team. Services maintain a strong client focus relating to keeping clients informed about services and the handling of personal data.

Services prioritise provision of staff development through training and regular supervision. There is a strong foundation across the network to measure, manage and address needs although there was a widespread recognition that this objective is challenged by a funding model that limits their capacity for innovation and effective inter-agency working both vertically and horizontally. Although there was general satisfaction with partnership working and treatment procedures led by GamCare, questions were raised about inflexibility regarding number of sessions offered and resources for pathway development/innovative service development.

The following areas were highlighted as gaps in delivery of optimal treatment:

- ***Need for quality standards;***
- ***Stronger processes and structures for incorporating client feedback and involvement of experts by experience to build on key innovations in these areas;***
- ***Limited provision of continuing care to clients and of linking effectively into mutual aid (with a strong commitment to SMART Recovery) that needs to be addressed;***
- ***Structures are needed for incorporating staff concerns and ideas were seen to need further enhancement and development;***

- ***Frustration was expressed around ability to respond to threats and opportunities including lack of resources to co-operate with other stakeholders to develop integrated systems and recovery pathways to provide aftercare or on-going support services;***
- ***Lack of awareness even within the sector of pathways and models of care.***

### *3.3.4 Other key stakeholders*

An additional component of the site visit approach that was offered was in including partner agencies who had a key role in service delivery. In total there were three representatives of referral agencies interviewed.

These partners included a mental health and homeless service, an employee union representative, and an NHS service that work directly with treatment providers. It was clear that all of the individuals interviewed were in support of engaging with the gambling treatment services they worked with and there was a sense of the growing importance of these agencies due to the increased recognition of the impacts of gambling-related harm. Referral agency representatives were asked about their pathways of engagement with services, perspectives on Problem Gambling (PG) and Gambling Related Harms (GRH) at the national and local level, and what are the systematic gaps and needs for developing better awareness and pathways for GRH and PG service users.

The union representative service interviewed stated that they have become more aware of gambling-related harm among their 1.2 million represented employees through identification in the workplace. They searched for counselling and were introduced to their now referral agency. They were particularly enthusiastic about the onsite training they have received; however they did state that they often are not able to recognize or get involved until the employee's problem has already become a crisis and would like a way to develop prevention methods before reaching this critical state. They also stated that this relationship is the only resource they have to provide treatment services to the 1.2 million people they represent. They expressed the need for more training initiatives, a national campaign about signs of problem gambling to address education and security for those needing help that they will get the services they need. The work that Beacon Counselling Trust is doing with the trade unions around a workplace charter is a good example of innovative work with important implications for early engagement and attempting to address hidden and unmet need.

The mental health and homeless agency interviewed stated that they became aware of gambling related harm through a local networking call in which the gambling treatment agency was looking for rental space, but had no awareness any gambling related harm services, other than Gamblers Anonymous, until this contact. The agency did state that problem gambling has always been an issue within their client group, but was not addressed until establishing the referral pathway. Since then they have received training and adjusted their screening methods to include problem gambling and have referred 3 out of 60 clients in recent months for services. The pathway and referral process was identified as a "work in progress" and it was suggested that a formal structure for referrals for external services is needed at national and local level to improve service continuity. Suggestions for immediate development and programs were: more out-reach

support for problem gamblers, educational and training workshops, and the need for GRH to be treated as a "live" issue throughout the healthcare system as this is currently a huge gap in the wider schism of service delivery pathways.

The NHS service interviewed became engaged with the gambling treatment services within the last year through outreach by the gambling service provider. The provider became aware of problem gambling as a health risk through the engagement and training provided by the treatment provider after initial contact. Since that engagement, their office has been trained to use a four-question risk screen for gambling related harm and problem gambling a mutual referral pathway has developed between the mental health service and gambling treatment provider. Once identified clients are then referred directly by practitioners for a telephone screen with the treatment provider which was stated to be an "excellent partnership" but expressed the need for more support in expanding awareness, education, communication and signposting at the national and local level.

## 3.5 Overall site visit emerging themes

Across all site visits, interviews, and stakeholder groups, several common themes emerged:

- Inadequate prevention and education in schools, colleges and universities. There was a perception that the problems associated with gambling were increasing but there was insufficient education in schools (and in tertiary education) and that raising awareness about the problems associated with gambling was a key and unmet need, and that the growth of the gambling industry, particularly online, had not been matched by effective responses;
- There was a general agreement that, in general, treatment works but there is not enough of it and it is too 'cookie cutter' with insufficient diversity in treatment options available and in the types of therapeutic support offered. Agencies generally reported the use of a cognitive behavioural model, delivered in one-to-one sessions, reflecting a theoretical approach universally employed in drug and alcohol services and mental health treatment, but that has also been shown to be effective in research studies for problem gambling;
- Although services gave striking descriptions of client presentations and the particular challenges of working with problem gamblers, in general, this has not been translated into clinical guidance. For instance, although stigma and associated shame emerged as a strong theme, the use of recognised treatment approaches to deal with such issues was not mentioned by providers.
- There was also a sense that the needs of both particular vulnerable and at-risk groups, and of clients with multiple complexities, were not adequately addressed;
- There does not appear to be an agreed structured process for assessment of client suitability for more intensive residential care. This was part of a broader perception of needs for greater continuity of care, more effective pathways within gambling services and between gambling services and other agencies, and an inadequate use of peer resources and community supports to maintain treatment gains following the completion of treatment episodes.

There was a perception that many of the obstacles to treatment, both internal and external, could be overcome with appropriate partnership and marketing initiatives. However, at present, it was felt that there is insufficient resource dedicated to development in these areas, and that greater flexibility was needed in the commissioning of specialist gambling treatment. A major concern was that there are currently ineffective pathways between gambling services and from other specialist services – especially with pathways to and from GPs.

There was general agreement that there is insufficient resource and support for affected others, and that there was far too great a reliance on unfunded community groups and volunteering to plug this gap. Alongside gaps, service strengths highlighted were:

A. Evidence of sound quality assurance and governance processes in core realms.
B. Prioritising of staff support through training, supervision and flexible working arrangements, and a strong, capable and committed workforce.

In summary treatment services present as operating at a foundational level of service delivery. As such they have successfully established core care and governance processes and provide at least a basal level of severity-matched interventions. One counsellor said, 'the current service is skeletal and waiting to move further'. Services report that they are ready to extend their provision towards a more comprehensive recovery service but require more funding to move forward.

## Work Package 4: External Stakeholder Groups

### *4.1 Overview*

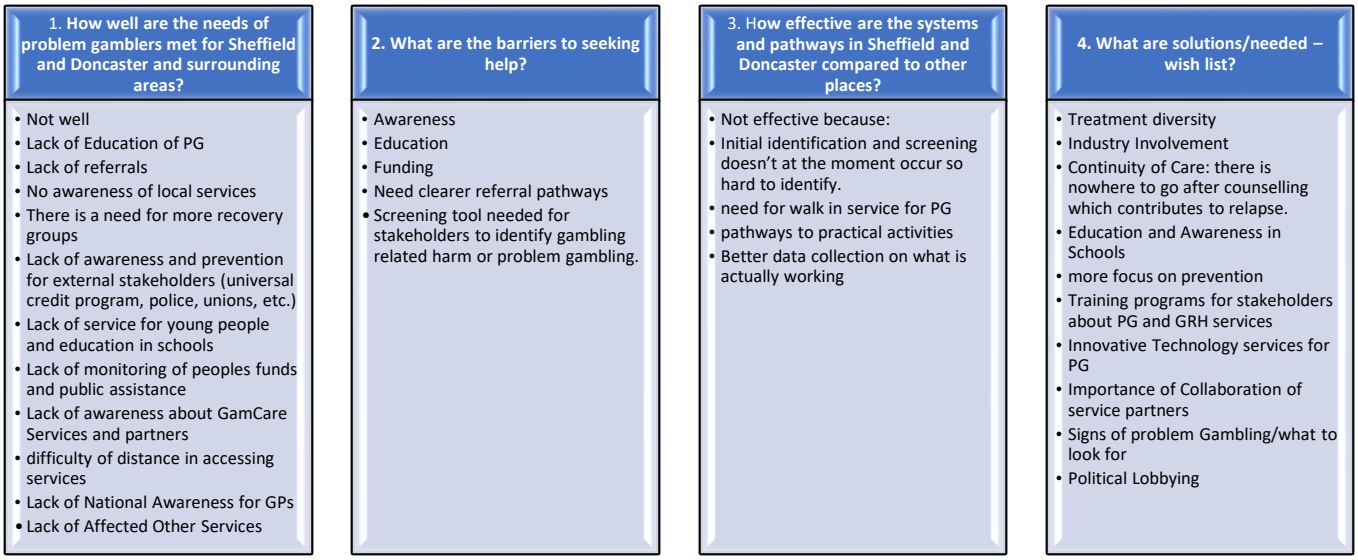
One of the most important aspects of the gambling services needs assessment research was to engage services and community stakeholders that may come across clients or people suffering from gambling related harm but currently do not provide treatment services. ACT held two external stakeholder discussion workshops during the project in geographically different areas in order to evaluate gambling related harm service systems from diverse areas. The aim was to allow a voice to those who had strong views but had not been engaged through the site visit process.

The first workshop was held in Sheffield, United Kingdom in partnership with Public Health England NHS Sheffield on June 12th 2019 and was attended by 12 external stakeholders and two gambling treatment service providers (neither of them from the local area), and one organisation representing affected others (Gambling With Lives), as well as three people who were themselves in long-term recovery from gambling problems. The second workshop in Doncaster was held on July 19th 2019 in partnership with Rotherham, Doncaster and South Humber NHS Trust (RDaSH), with a similar mixture of people in long-term recovery, professionals from the gambling area and related professional groups. The round-robin discussion from both of these workshops revolved around four discussion questions about strengths, gaps, and needs from the perspective of external stakeholders for local and national pathways to gambling related harm information and treatment services.

The sessions were semi-structured and all participants, who were asked to describe their reasons for attending and their role at the start, were provided with an overview of the aim of the session and the overall purpose of the needs assessment project. It should be mentioned that, while attendance at the events were good and the subsequent discussion extremely robust and informative, there were significant omissions from each session in terms of attendance. There was at least one primary care agency contacted to attend the external workshops that declined the invitation as they did not see that problem gambling was relevant to their work despite being a primary health care facility. Similarly, the provider of gambling services in Sheffield was invited but did not attend the event.

Each event lasted for between two and three hours, with wide-ranging discussion and views that often reflected those of the participants in the site visits. The theme of lack of knowledge and engagement by primary care facilities has been highlighted as a constant theme throughout all interviews and workshops in this research, so this provided direct evidence of the lack of engagement by primary care about gambling related harm or problem gambling as a health concern. The figure below represents the summary of responses to each question from both external stakeholder workshops.

**Figure 4.1: Key themes emerging from the two workshops**




Many of the themes reported above are consistent with the findings in other areas of the report involving both primary and secondary data collection. This was a particularly important forum as the discussions between the family support groups, providers, local authorities, individuals in recovery from gambling problems and health providers were extremely wide-ranging, and at times heated. Among professionals from link services (particularly the local authority in the first event) there was a worrying lack of awareness of gambling treatment with a number of individuals expressing surprise that there was a gambling treatment service in Sheffield as they had never heard of it!

Nonetheless, there was consensus about a need for great information and awareness and for universal and targeted education. One of the key issues from both of the workshops was low levels of awareness of specialist provision in the local areas among both professionals and among problem gamblers, and perceived issues about the visibility and accessibility of gambling treatment.

There were also concerns about the adequacy of treatment pathways both generically and for specific populations, with a particular concern about assertive community engagement and education for young people who were perceived to be increasingly exposed to gambling advertising and products. Participants from youth services were extremely concerned about what they felt was a growing gambling problem in this group that was not being adequately addressed.

In both of the sessions, concerns were expressed about the power of the gambling industry and the relative weakness of responses, including the engagement of other professional groups including GPs and other agencies who worked with vulnerable populations. In both sessions, there was a perception among the family support groups and the people in recovery that help was

neither sufficiently accessible nor sufficiently intensive or enduring to address the scale and severity of gambling problems.

There was also a concern expressed about the lack of continuity of care options and the diversity of treatment opportunities and pathways for problem gamblers. Overall the participants in the workshops felt that there was a growing level of gambling problems and that there needed to be a much stronger and more robust response and that the gambling providers should be actively engaged in contributing to this work.

# Conclusion and Recommendations

After completing all workstreams and analysing the data and reporting it is clear that there are strengths within the existing treatment system that can be built upon to address existing gaps and obstacles to delivery of gambling related harm services. However there are also clear gaps and these are consistent across all of the work packages.

The key lessons from the rapid evidence review are that problem gamblers generally do not seek treatment until they are in crisis and those who do seek help typically:

A. Have greater complexity of life issues, and that they are a heterogenous group
B. Have more adverse gambling consequences
C. Are under more social pressure to engage
D. Are older (primarily between the ages of 35 and 54)

This was reflected in the findings of our secondary analysis which demonstrated that engagement in specialist gambling treatment is a challenge for younger gamblers and for those not in stable relationships. This was also reflected in the perceptions of the participants in the site visits and stakeholder events who identified gaps around young people.

There are also specific treatment needs for specific groups including younger gamblers, those from minority ethnic groups and for women. It is not the case that women in Great Britain are less successful in engaging and completing treatment, but their trajectories and associated harms are likely to be different and there is a strong case for gender-specific treatment pathways.

There are particular problems around shame and stigma that services need to address and also about the perceptions of the effectiveness of treatment where people are not seeking treatment because they either do not know about it or because they believe that treatment would not help them. There are opportunities for public awareness and marketing campaigns to address these popular misperceptions.

Particularly for women, there is an issue around perceived inaccessibility and around shame. For all gamblers entering treatment, it is clear that staff should be supported and trained to support clients in managing stigma and shame and work should be done to offer training and support to gambling treatment staff to allow them to work effectively in this area.

The literature is clear that the primary barriers to treatment engagement are stigma, shame, denial, a desire to sort the problem out without seeking help, perceived ineffectiveness of treatment services, and practical issues around accessing services. There is also evidence that early drop-out is associated with low abstinence self-efficacy and low social capital and to address these, psychological interventions should be supplemented by effective pathways to community engagement and peer support (as a form of continuing care). Given the findings of the secondary data analysis, retention in treatment is a problem and adjunctive supports to promote active engagement and follow-ups for those who drop out are likely to be highly beneficial.

For those pathways into specialist treatment to be effective, much more needs to be done around inter-agency working and partnerships. The positive evidence from the stakeholder events and site visits would suggest that there is considerable innovation and success, but this is typically on a local level and may be reliant on individual relationships. Partly this will require raising the awareness of gambling treatment but it will also require strategic partnership enhancements and commitment to specialist training for a range of professionals, including, but not restricted to GPs. Existing innovative practices also need to be evaluated to ensure that lessons can be learned and successes generalized.

A key message for dissemination is that treatment is effective where it is delivered but that the number of people receiving treatment is not sufficient and that far too many people drop out before the initiation of contact and effective engagement. The comments about gaps around continuity of care (including aftercare) and the lack of adequate peer support (from the site visits) are linked and there is potentially a key role for experts by experience in both community engagement and in providing community support after the completion of specialist treatment. This includes a core role for family support groups and family members who should also be classed as experts by experience and who have a major contribution to make.

The issue of pathways and systems has arisen throughout the needs assessment and is consistent with an evidence base which shows that telephone and online support can both be a pathway into treatment and a standalone option. We have also cited evidence that suggests that follow-up telephone calls can increase treatment engagement which is likely to be of significant benefit given the high early attrition rate reported in the secondary analysis of DRF data.

Although there are limitations to DRF, with completion rates low for some fields, it should form the basis of both performance management and mapping treatment effectiveness at an individual and agency level. The work done on clustering clients requires further testing but suggests that treatment seekers can be grouped into classes whose needs and risks could be managed more effectively. This analysis also provides a strong vindication for residential treatment for gambling and pathway work should be undertaken to identify those who will benefit most from this form of intervention. Both of these suggestions are consistent with reports from service users that treatment does not adequately respond to client diversity and the concerns expressed by service managers and treatment staff that there should be greater flexibility in treatment options at a local level to meet the needs of a diverse population.

While there are examples of innovative activities around user and carer engagement (particularly the GNHWA group supported by Beacon Counselling Trust), work with criminal justice (by Breakeven), work using peer models (with GamCare and BetKnowMore) and with the workplace (by Beacon Counselling Trust), the lessons from these initiatives need to be evaluated.

The following list is a recommendation of actions that would address some of these immediate needs as well as provide a more comprehensive structural framework to the current national and local service delivery model.

## Recommendations

### For gambling treatment commissioners

1. Effective treatment pathway development as an integrated system of care both vertically and horizontally;
2. Greater flexibility in treatment packages underpinned by commissioning arrangements that promote partnership and improved inter-agency working;
3. Develop a review and improvement plan for data quality in the DRF;
4. A formal exercise to facilitate sharing of good practice among providers with an aim of assessing applicability across agencies.

### For regulatory and oversight bodies

5. A comprehensive national media campaign to increase public awareness that addresses 'what is Problem Gambling' and that disseminates information about the services available at national and local levels, and the effectiveness of specialist gambling treatment;
6. The development of clear quality standards for treatment services including for pathways into treatment, adjunctive support and aftercare;
7. Review of linkages with NHS providers of general and specialist healthcare with a particular emphasis on GP awareness and formal connections with gambling treatment providers;

### For treatment providers

8. Personalised packages of care that address client presenting issues, and that address the needs of particular vulnerable groups including young people, minority ethnic groups and those with co-occurring mental health, criminal justice and substance misuse issues;
9. Treatment processes that offer targeted support around stigma and shame, and training for specialist staff in identifying and addressing these issues;
10. Clear models for continuing care including referral to mutual aid groups (including SMART Recovery and Gamblers' Anonymous);
11. Greater commitment to a lived experience model as central to treatment delivery including both people with lived and living experience, and affected others. This should include training for peer mentors and a greater role for those with lived experience (including affected others) in primary and secondary prevention;
12. Augment current staff support structures with formal processes for incorporating staff feedback and avoiding dual responsibility for line management and supervision.

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**Appendix II:** REA Table of included studies

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## Appendix III: Segmentation Methodology

Two years' data (2015-2016 and 2016-2017) were merged which created a treatment pool of 15,906 individuals, from whom it was possible to extract a subset of 8,153 individuals who received treatment. The full range of variables held in the DRF was assessed for coverage. The variables "Age of problem gambling onset" and "Time gambling (years)" were not utilised as they contained several mis-recordings. Two new variables were derived as the difference

between subject 'Age' and the above two variables, occasionally resulting in negative values, which were rejected. Further, 1507 subjects (18.5%) refused to answer the first question and 1159 subjects (14%) refused to answer the second. Further, inclusion of 'Agency' made the clustering algorithm incapable of producing a clear-cut solution, probably due to 96% of records belonging to Agency "GC" (GamCare), so enabling little discrimination (see table 3). Only 2 of the remaining 17 variables included in the clustering exercise had some missing values, namely 'Problem Gambler' (3) and 'Age Bands' (37), so that a total of 8,113 subject were included in the final analysis.

**Table 1: Summary statistics for 'Agency'**

| Agency | Number | Percentage |
|---|---|---|
| CNWL | 240 | 3.0 |
| GC | 7,792 | 96.1 |
| GM | 80 | 1.0 |
| Total | 8,113 | 100.0 |

*the numbers may not add to 10% due to rounding

Variables that were a mix of numerical values and a substantial proportion of text such as "don't know" or "refused" were dichotomised into "refused" or "replied", money spend per day, money spend per month, time spent gambling (last 30 days). Three nominal variables (relationship status, relationship loss, debt due to gambling) were also dichotomised. The numeric variable time between referral and treatment end (days) was categorised as ordinal. It should be noted that most variables were nominal or ordinal, so the data were dichotomised for ease of analysis. This was undertaken as a way to avoid some groupings that would have only existed under one treatment (known as complete determination). This prevents balancing to be achieved using the method outlined in Linden et al, 2016. If there is no control over treatment assignment then balancing cannot be done.

***Methodology***

A clustering exercise was conducted using Ward's linkage method by considering 48 variables. As the variables were on mixed measurement scales, a Gower index of similarity was used in the clustering exercise. The final number of clusters was determined as four by using a stopping rule that combined two summary measures: maximising the pseudo-F statistic while simultaneously minimising the pseudo T-squared statistic that has a much larger T-squared statistic following it, as shown below.

**Table 2: Statistics used to determine the number of clusters when using Ward's linkage method**

| Number of clusters | Calinski/Harabas pseudo-F | Duda/Hart Je(2)/Je(1) | Duda/Hart pseudo T-squared |
|---|---|---|---|
| 2 | 1132.81 | 0.9418 | 440.33 |

| | | | |
|---|---|---|---|
| 3 | 818.49 | 0.8659 | 117.83 |
| 4 | 591.67 | 0.9237 | 81.15 |
| 5 | 466.25 | 0.8922 | 361.80 |
| 6 | 452.03 | 0.9803 | 75.87 |
| 7 | 393.89 | 0.9676 | 59.72 |
| 8 | 349.82 | 0.8621 | 85.90 |

The four clusters are each composed by the number of individuals shown in Table 2.11:

**Table 3: Cluster Membership**

| Cluster | Number | Percentage |
|---|---|---|
| Cluster 1 | 346 | 4.3 |
| Cluster 2 | 2,998 | 37.0 |
| Cluster 3 | 3,785 | 46.6 |
| Cluster 4 | 984 | 12.1 |

Cluster 1 comprises fewer than 5% of the total number of individuals; cluster 2 comprised 37% of individuals; cluster 3 comprised about 47% and cluster 4 about 12% of individuals in the database.

**The Stopping Rule**

The pseudo-F index is the ratio of the sum of the diagonal elements from matrices of sum of squares and cross-products, namely that between clusters divided to that within clusters, weighted by the ratio of group degrees of freedom by residual degrees of freedom. The more clearly separated the clusters are in multidimensional space, the larger the pseudo-F will be; hence the stopping rule need to maximize the pseudo-F index.

Similarly, Je(1) being the sum of squared errors within the candidate cluster that needs splitting into 2 clusters (to form one extra cluster), and Je(2) being the same measure for the resulting two subgroups, the larger the ratio Je(2)/Je(1) is, the more distinct the cluster separation is. As the pseudo-T square index is the reciprocal of Je(2)/Je(1), weighted by the residual degrees of freedom of the individual cluster that needs splitting, it follows that the Duda/Hart stopping rule needs to maximise the ratio Je(2)/Je(1) while simultaneously minimise the pseudo T-squared index. That means that distinct clustering is characterized by large values of both the pseudo-F and Je(2)/Je(1) indices and small values of pseudo T-squared index. In summary, the stopping rule combines maximising the pseudo-F and Je(2)/Je(1) indices while minimising the pseudo T-squared index.

## Appendix IV: Calculation of a Treatment effect estimation

Our research question was to understand whether a broad treatment effect could be determined based on information contained within the DRF. A two-year period of treatment data was amalgamated into a single data file. A total of 8,113 treatment episodes were created. As the majority of interventions are psychosocial in nature, three different "treatments" (named by 'agency' – CNWL, GC and GM) were created with a binary outcome whether or not a subject has completed the treatment. Analyses were undertaken using STATA v15.

The approach to determining a treatment effect effect starts by including one prognostic at a time to ensure the method converges (e.g. finds a stable numerical solution) and assess graphically if the covariates balance after weighting appears satisfactory. The results were obtained using an inverse probability weighting with regression adjustment (IPWRA) method, which is considered the most robust of four available methods that support multivalued treatments (Linden et al, 2016). As its name suggests, this method uses Inverse Proportional Weights to rebalance covariate distribution across treatments, coupled with a Regression Adjustment to estimate the potential outcome means for each treatment.

*Prognostics included into the IPWRA method*

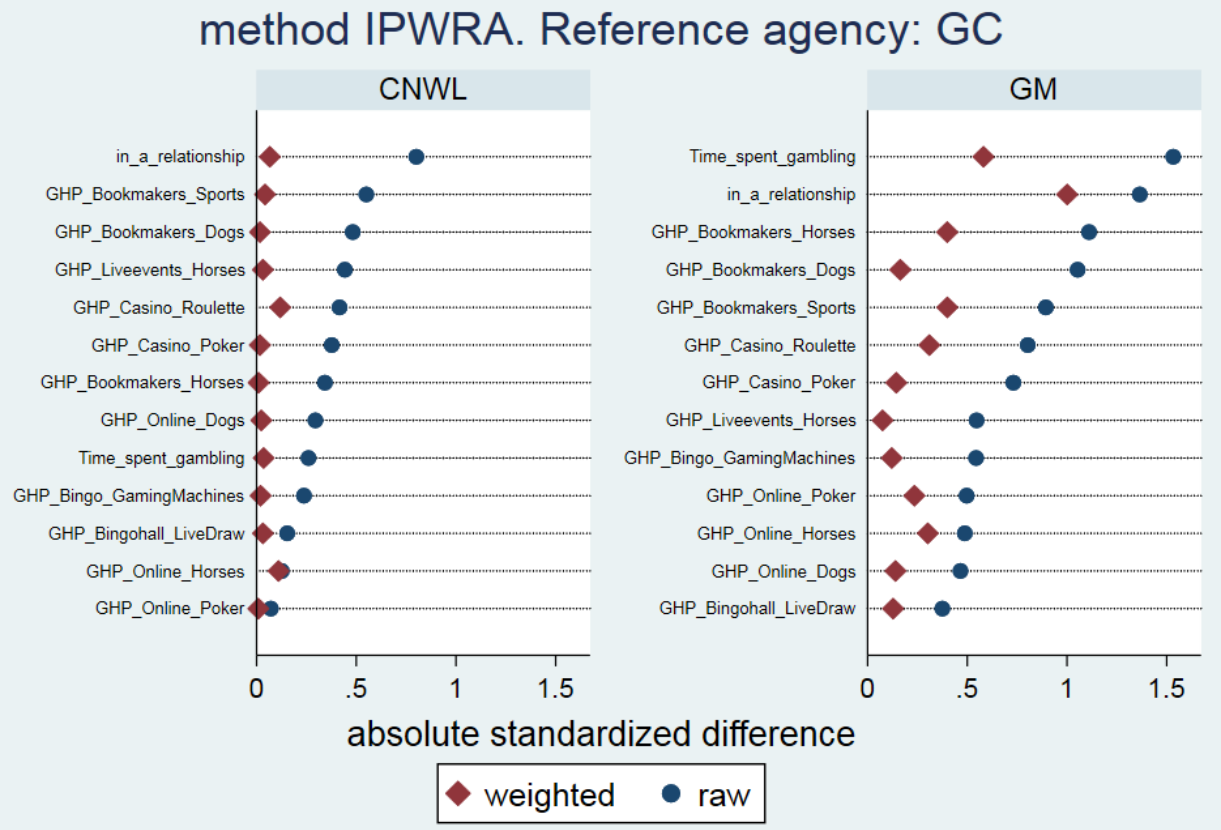
We included the same set of prognostics in both the binary model for outcome 'Completed Treatment' and for the multinomial model for Agency as "treatment". We managed to fit a list of 15 prognostics in both models. Two binary demographics, namely: Currently in a relationship, Time spent gambling (last 30 days). One numerical baseline measure, namely: First PGSI score, First CORE 10[10] score was initially tested but was shown to be more unbalanced than before and therefore were removed. Eleven binary Gambling History Previous prognostics, namely: Bookmakers: horses, dogs and sports, Bingo: gaming machines and live draw; Online: horses, dogs, poker; Live events horses; Casino poker and roulette.

Covariates balance summary

The literature on treatment effect for treatment highlight the need to present information on 'balance' which is a diagnostic in which the distribution of measured baseline covariates is similar between treated and comparison groups. This method is referred to as 'balance diagnostics'. We present a plot of absolute standardised differences (Austin and Stuart, 2015) in Figure 1 below.

[10] The CORE 10 is a ten question validated psychological evaluation questionnaire use to gauge the severity of anxiety, depression, social relationships, trauma, and physical well-being (http://www.coreims.co.uk/About_Measurement_CORE_Tools.html).

Figure 1: Plot of absolute standardised difference before and after weighting




The reference is agency GC. In figure 1, the ideal situation is seen in the panel for agency CNWL, where all diamond symbols are located very close to the value of zero on the horizontal axis. The pattern is less clear for agency GM, likely due to its very small sample size of 80 subjects. Though we cannot say that complete balance was achieved, all diamond symbols are on the left of the circle symbols. So, we can say that the included covariates are less unbalanced after weighting than before it.

*Limitations*

Is it essential to stress that important demographics could not be included in the covariate rebalancing exercise as they showed no overlap. If it is deemed essential to rebalance the distribution of such covariates across agencies, then there must be some overlap (a non-zero count) in all agencies for the relevant demographics.

For instance, in agency GM there was no subject who was a female, who was 55+ years old, who experienced a big early win, who was classed as not a problem gambler, who waited up to one month between referral to treatment end (everyone waited longer), who was able to say if they had experienced a job loss, or a relationship loss.

*Detailed Results*

Throughout this section, a Bonferroni method is applied for multiplicity adjustments. The key variable in Table 4 is the coefficient comparison across the agencies:

**Table 4 Calculation of Potential Outcome Means**

| | Coef | Robust Std. Err | Z | P>[z] | 99% Confidence Interval (lower, upper) | |
|---|---|---|---|---|---|---|
| GC | 0.613 | 0.006 | 108.54 | <0.0001 | 0.600 | 0.627 |
| CNWL | 0.566 | 0.062 | 9.16 | <0.0001 | 0.418 | 0.714 |
| GM | 0.877 | 0.040 | 21.66 | <0.0001 | 0.780 | 0.973 |

There is a 95% chance that all confidence intervals simultaneously contain the true value of the proportion of subjects completing treatment in all three agencies. In this context the Average Treatment Effects are pairwise comparisons of estimated potential outcome means (or "risk differences").

**Table 5: Derivation of an Average Treatment Effect**

| | Coef | Robust Std. Err | Z* | P>[z]* | 99% Confidence Interval (lower, upper)* | |
|---|---|---|---|---|---|---|
| CNWL vs GC | -0.472 | 0.062 | -0.76 | 1.00 | -0.219 | 0.125 |
| GM vs GC | 0.263 | 0.409 | 6.44 | <0.0001 | 0.150 | 0.377 |
| GM vs CNWL | 0.311 | 0.074 | 4.20 | <0.0001 | 0.106 | 0.516 |

*Bonferroni correction applied

The marginal model estimates that if all subjects were shifted to agency GM, the completion rate would be 26 percentage point higher than in agency GC and 31 percentage point higher than in agency CNWL, although it should be recognized that GM is a small and specialist unit that would not be suited to all treatment seekers and where unit costs are likely to be significantly higher. There is a 95% chance that all confidence intervals simultaneously contain the true value of the difference between proportions completing treatment in all 3 agencies.

**Relative Risk**

Below (Table 6) are the ratios of estimated Potential Outcome Means; as the latter are on a probability scale, these ratios are analogous to Relative Risks. Inference was conducted on a logarithmic scale and the results anti-logged.

**Table 6: Relative Risk by Treatment agency**

| | Coef | Robust Std. Err | Z | P>[z] | 99% Confidence Interval (lower, upper) | |
|---|---|---|---|---|---|---|
| GM v CNWL | 0.438 | 0.119 | 3.69 | <0.0001 | 0.154 | 0.721 |
| GM v GC | 0.357 | 0.047 | 7.58 | <0.0001 | 0.245 | 0.4702 |
| GC v CNWL | 0.080 | 0.110 | 0.73 | 0.465 | -0.182 | 0.342 |

The first two comparisons are "statistically significantly different at 5%" (the last model between GC and CNWL is not).

*Other weighting methods*

We conducted the three other weighting methods that support multivalued treatments, to assess the variation in estimates of treatment outcome.

The alternative methods are:
RA: Regression adjustment
IPW: Inverse probability weighting
IPWRA: Inverse probability weighting with regression adjustment
AIPW: Augmented inverse probability weighting

As expected, the agency whose estimated POM varied most is the one with fewest records. Estimates for GM spanned a range of about 0.285 units and those for CNWL of about 0.092 units. Conversely, POM estimates for agency GC are much less variable.

**Table 6: Summary of Alternative Approaches to Determining a Treatment effect**

| **Alternative Methods** | **GC** | **CNWL** | **GM** |
|---|---|---|---|
| IPWRA | 0.6131 | 0.566 | 0.8765 |
| AIPW | 0.6133 | 0.5621 | * |
| IPWRA | 0.6135 | 0.5632 | 0.9888 |
| RA | 0.6142 | 0.6541 | 0.07938 |
| Range | 0.001 | 0.092 | 0.285 |
| (n) | 7,793 | 240 | 80 |

# Appendix V: Secondary Data Analysis References

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