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Non-attendance at psychological therapy appointments

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Abstract

Objective: Research demonstrates that non-attendance at healthcare appointments is a waste of scarce resources; leading to reduced productivity, increased costs, disadvantaged patients through increased waiting times, and demoralised staff. This study investigated non-attendance and implemented interventions to improve practice.

Method: A mixed methods service audit took place in a primary care psychological therapies service. Existing service guidelines and reporting systems were reviewed. A cross-sectional design was used to compare a year's cohort of completers of cognitive behavioural therapy (N=140) and drop-outs (N=61).

Results: Findings suggested contrasting guidelines and clinically inaccurate reporting systems. The overall service DNA (Did Not Attend) rate was 8.9%; well below rates suggested in the literature. The drop-out rate from cognitive behavioural therapy (CBT) was 17%. The most influential factor associated with CBT drop-out was the level of depression. The level of anxiety, risk ratings and deprivation scores were also different between completers and drop-outs. The main reasons given for non-attendance were forgetting, being too unwell to attend, having other priorities, or dissatisfaction with the service; again these findings were consistent with prior research.

Conclusions: A range of recommendations for practice are made, many of which were implemented with an associated reduction in the DNA rate.

Keywords:

Service audit

Psychological therapy

Non-attendance

IAPT

Introduction

Non-attendance is an aspect of service delivery that has been affecting health services generally and mental health and psychological therapy services in particular for decades. In the UK up to one in ten outpatient appointments are missed (The Information Centre for Health and Social Care, ICHSC, 2006) with a calculated cost of £600 million a year (Dr Foster Research Limited, 2009). Non-monetary costs of non-attendance include longer waiting times, wasted resources, and poorer clinical outcomes (Stone, Palmer, Saxby, & Devaraj, 1999). Non-attendance has also been associated with having a negative emotional impact on healthcare professionals (Tweed and Salter, 2000). Although focusing on failure to attend appointments (i.e., Did Not Attend or DNA rates) is important, patients can still have successful treatment despite missing the occasional session. Therefore also focusing on the drop-out rate or non-completion of treatment is important. Drop-out can be defined as when patients leave treatment sessions early in an unplanned manner before treatment has finished; patients stop attending without prior agreement (Westbrook and Kirk, 2005). Because of the implications of non-attendance within health services there has been a governmental focus on this area for several years. Within the National Health Service (NHS), ensuring attendance at psychological therapy appointments is an important part of meeting many Department of Health recommendations (DoH, 1999; 2000) and guidelines (e.g. NICE, 2004; 2005).

Non-attendance and drop-out

From studies commissioned by UK governmental departments DNA rates varied in general outpatient healthcare settings from an average of 8.5% (DoH, 2010) to 10% (ICHSC, 2006) and non-attendance rates (DNA and cancellations) were found to be almost 20% (ICHSC, 2013). In their review paper Mitchell and Selmes (2007) explored the issue of engagement with psychiatric services arguing that up to 20% of appointments in psychiatric services are missed (DNA), which is twice that

of other medical specialities. Initial appointments are more likely to be missed than follow ups, and 50% of patients who miss appointments are likely to drop-out from treatment.

Average attrition rates or drop-out rates from psychological therapy vary according to the methodology of the study (naturalistic, clinical or combined) and the definition used. Royal College of Psychiatrists (2011) calculated the drop-out rate to be 25%, with the median number of sessions attended before drop-out being two. This is comparable to the findings of Westbrook and Kirk (2005) who calculated the drop-out figure to be 22.5% in a large sample from a routine clinical practice receiving Cognitive Behavioural Therapy (CBT). Although, much lower attrition rates (5.6%) have been reported for CBT in controlled trials (Butler, Chapman, Forman and Beck., 2006). Meta-analytic approaches combining naturalistic and clinical trials include Wierzbicki and Pekarik (1993), who found a mean drop-out rate of 46.86%, and more recently by Swift and Greenberg (2012) who found a rate of 19.7% (669 studies - 83,834 subjects).

Grant, et al., (2012) investigated attrition from psychological therapy in regards to the stage of treatment. Using a retrospective case note audit of four months of referrals (N=497), 32% failed to opt in to the service after referral, 26% opted in but failed to attend their first appointment, 34% attended therapy sessions but dropped out; 8% did attend assessment but were deemed unsuitable for the service and were referred elsewhere. It therefore seems that drop-out can occur throughout the care pathway, not just in active treatment.

Factors associated with non-attendance tend to focus on demographic, patient and service causes. In general healthcare settings young men (15-44 years old) are most likely to miss appointments (ICHSC, 2006); with young men almost twice as likely to DNA compared to women of the same age (ICHSC, 2013). A history of non-attendance (Neal, Hussain-Gambles, Allgar, Lawlor and Dempsey, 2005) and poorer levels of health (Akhter, Dockray and Simmons, 2012) are associated with non-attendance. The service factors associated with non-attendance include the way in which appointments are booked, clerical errors or communication failures (NHS Institute for Innovation and

Improvement, 2008). In secondary care mental health settings being younger, having a history of self-harm, higher levels of social deprivation (Hillis, Alexander and Eagles, 1993), higher levels of mental disorder (Killaspy, Banerjee, King and Lloyd, 2000) and the method of invitation to the appointment (Hillis and Alexander., 1990) are all influential in determining non-attendance. For psychological therapy settings minority racial status (Wierzbicki and Pekarik, 1993), low education (Keijsers, Kampman and Hoogduin, 2001; Wierzbicki and Pekarik, 1993), being younger (Saxon, Ricketts and Heywood, 2009; Jones, Carraretto and Deacon, 2008), low socio economic status (Wierzbicki and Pekarik, 1993), higher levels of social deprivation (Grant et al., 2012; Self, Oates, Pinnock-Hamilton and Leach, 2005), having a diagnosis of personality disorder (Schindler, Hiller and Witthöft, 2013; Swift and Greenberg, 2012) or eating disorder (Swift and Greenberg, 2012), greater psychological distress (Saxon et al., 2009), higher levels of measured agoraphobic avoidance (Lincoln et al., 2005), high depression scores (Jarrett et al., 2013), lower motivation (Keijsers et al., 2001), and being seen by a trainee therapist (Swift and Greenberg, 2012) are all related to increased drop-out. No significant differences have been found in drop-outs rates between psychological therapy approaches (Grant et al., 2012; Hembree et al., 2003), however the nature of the therapeutic relationship has been suggested to correlate to psychotherapy drop-out (Sharf, Primavera and Diener, 2010).

Reasons given for non-attendance at general and secondary care mental healthcare appointments are remarkably similar. Forgetting is given as the most frequent reason (Neal et al., 2005; Akhter et al., 2012; Killaspy et al., 2000), apathy (Murdock, Rodgers, Lindsay and Tham, 2002), illness (Akhter et al., 2012; Killaspy et al., 2000; Lever Taylor, Shenoy and Holmes, 2013), work commitments (Hillis and Alexander, 1990) and clerical errors (Killaspy et al., 2000) are also reported. Reasons unique to mental health settings are being unhappy with the referral (Killaspy et al., 2000; Lever Taylor et al., 2013), stigma, and fear (Hillis and Alexander, 1990). For psychological therapy reasons for drop-out include dissatisfaction (Keijsers et al., 2001) and inconvenient appointments (Jones et al., 2008; DeFife, Conklin, Smith and Poole, 2010).

Strategies to reduce non-attendance

A variety of strategies to reduce non-attendance are described in the research literature. Monetary solutions such as fining patients for non-attendance have been put forward (e.g. Bech, 2005). However this approach lacks research evidence, is against the principles of the NHS, which states healthcare must be free at the point of access, and may create a barrier to services potentially leading to deterioration in health and further disengagement. Charging patients that DNA has also been classed as unfair (Jones and Barham, 2009). Additionally they are unpractical as there would be difficulties with the administration and enforcement of such a system (Fysh, 2002).

In general healthcare settings the 'choose and book' system (DoH, 2004) is widespread throughout the NHS. The system allows patients to contact the relevant service they have been referred to and have a choice of appointments, making it more convenient for the patient. The system has been shown to reduce non-attendance rates in some NHS trusts (Doncaster and Bassetlaw Hospitals NHS Foundation Trust, 2008). However, appointments are still missed and some healthcare organisations overbook appointments assuming that some will be missed. Whilst this may be a good use of resources, the overbooking system has been accused of not working and disadvantaging patients (Lacy, Paulman, Reuter and Lovejoy, 2004). Text message reminders have also been shown to be effective and have the advantage of being cheap and safe (Car, Gurol-Urganci, de Jongh, Vodopivec-Jamsek and Atun, 2012).

Other interventions (Martin, Bassi and Dunbar-Rees, 2012) have used social influence theory to exploit the idea that people tend to live up to their commitments. Patients were asked to verbally repeat back their booking details (a statistically non significant reduction in DNA of 3.5%) or at repeat appointments they were asked to write down their next appointment on the booking card rather than the nurse doing it (a significant reduction of 18%). Both interventions aimed to get the patients more involved in booking the appointment so they would be more committed to attending. Another

intervention reversed the common practice of making patients aware of the cost of non-attendance by displaying posters demonstrating the number of missed appointments in waiting rooms. These posters miss the target patient group, i.e., non-attenders, so instead posters displayed the number of patients who attended their appointments. This intervention, which was robustly tested, significantly reduced the DNA rate by 31.7%.

In mental health settings better communication between primary and secondary care has been hypothesised to lead to a reduction in non-attendance (Killaspy et al., 1999). The use of prompts before appointments (Reda, Rowett and Makhoul, 2012), in particular text messages (Sims et al., 2012), have been found to be effective in reducing non-attendance. Successful strategies to reduce drop-out from psychological therapy include therapists maintaining their own responsibilities regarding keeping appointments (DeFife et al., 2013), the use of a range of invitation methods including telephone booking and reminders (Pennington and Hodgson, 2012), and providing an end date to the therapy at the outset (Sledge, Moras, Hartley and Levine, 1990).

Context

The service being investigated in this study is an outer London borough's Improving Access to Psychological Therapies (IAPT) service that offers outpatient psychological therapies. The service is NICE guidance compliant and follows a stepped care model of delivery (Scogin, Hanson and Welsh, 2003; NICE, 2004) and is similar to many other UK IAPT services in terms of purpose and structure. There are two service providers that work in partnership: a local charity and a social enterprise (formally a NHS primary care trust). The low intensity or step two interventions (e.g., guided self-help or psycho educational groups) are provided by the charity and the high intensity or step three interventions (e.g., Cognitive Behavioural Therapy (CBT) or counselling) are provided by the social enterprise. In March 2012 the service was included in a service line review. Although the feedback

was positive, an area of concern was our Did Not Attend (DNA) rate. This was calculated to be 14.1%[1] where the standard set by the social enterprise was 5%. Service managers asked the team to investigate how we could reduce the DNA rate as a high DNA rate may indicate that the service was not performing as effectively as it could have been.

Aims

This study aimed to determine the rates of DNA and drop-out in the IAPT service, the circumstances under which they occurred, the relationship between attendance and clinical outcomes, and measures taken to reduce non-attendance. Producing recommendations for practice was the overall aim of the investigation.

Methods

Design

This study followed a quasi-audit methodology. Clinical audit can be defined as "A quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit standards and the implementation of change" (NICE, 2002, p.1). A full clinical audit methodology was not possible, as there was a lack of prior audits into the area by the service. Thus, there was no clear, definitive pre-existing data to act as a benchmark against which to compare the study's findings and there were no explicit standards within the service, apart from an unrealistic 5% target for DNA set by the organisation. There was a brief procedure outlining the non-attendance process in the service's operational policy, but this was considered too brief, too vague, and did not include enough information to guide an investigation. Given these limitations, the project was conducted with an increased emphasis on service evaluation more generally. The principles and basic

[1] In the subsequent months the DNA rate fluctuated and rose to a high of 20.1% in September 2012. In addition, the calculation of the DNA rate was later found to be inaccurate.

method of audit were used with a concurrent mixed-method design. By relaxing the standards for clinical audit, the findings would have to be treated with more caution, however, this hybrid model of investigation can be described as a service audit, a description of service process and outcome; this approach is particularly suited for psychotherapy services due to the multi-professional backgrounds that make up these services (Parry, 1992).

Although no existing service standards could be obtained, benchmarks from related published literature were chosen to allow comparison; this is in keeping with best practice guidelines for clinical audits (NICE, 2002). The NAPT study (Royal College of Psychiatrists, 2011) was chosen as it is most similar to the present study due to its naturalistic design, large sample size and focus on UK psychological therapy settings. The NAPT 25% drop-out rate and number of sessions attended before drop-out (med=2) were used as benchmarks. Regarding DNA rates, there is a clear difference between primary care and secondary care mental health services. The IAPT service is located in primary care but sees patients with mental health disorders, therefore it seems appropriate to set the benchmark for DNA rates between primary and secondary care findings: between 10% and 20%.

Ethical considerations

Before any investigations were undertaken the project was registered with the organisation's audit lead and ethical considerations were discussed. Assurances were given that no patients would be adversely affected by the study and that if any complications arose from the data collection they would be dealt with appropriately, for instance, if any patient expressed risk, and if contact details were provided, then the patient would be contacted. This project was viewed as service improvement rather than research, thus proposal forms were assessed by the National Research Ethics Service and the organisation's clinical governance department. Both agreed that full ethical approval was unnecessary.

Data collection and analysis

DNA policies and guidance

A review of existing service guidance was undertaken. Discussions were held with the service manager, administrative staff and the clinical governance department. Policy files were also reviewed to find any relevant information pertaining to non-attendance. In regards to strategies to reduce non-attendance time was spent reflecting on the current system, in particular the current care pathway was scrutinised. All administrative procedures were highlighted and noted (e.g. letters sent to patients after disengagement from the service). All strategies that aimed to reduce non-attendance were recorded. Further discussions were then held to assess how effective the team members perceived these strategies to be.

DNA and drop-out rates

Current reporting systems were analysed in liaison with the organisation's data analyst. To calculate the drop-out rate a year's cohort of patients (June 2011 to June 2012) was examined and their journey through the care pathway clarified and presented diagrammatically. Based on the stage the patients were at on 01/02/2013 the drop-out rate was clearly identified. In addition, the number of sessions attended before drop-out from CBT was calculated. This process also aimed to find out rates of non-attendance and where in the service non-attendance was occurring. DNA rates, and cancellation rates were produced for all patients in the cohort at all stages in the care pathway. Some elements of the data were combined where necessary (e.g. 'arrived late and was seen' was merged with 'attended on time' to equate to 'attended'). To enhance reliability as well as using data on individual sessions, the DNA rate and drop-out rate per therapist in the time frame was also calculated using the IAPTus software (clinical notes system).

Characteristics associated with drop-out

Following Mitchell and Selmes (2007), completed (controls) and drop-out patients were compared on a series of dependent variables, including individual and service-level characteristics and clinical outcomes. These were:

Age (years, rounded down); gender (male/female)

Ethnicity (originally coded according to the organisation's guidelines but collapsed into White British and Non-White British due to the diversity of the sample. Some data was missing, and these participants were excluded from these analyses)

Deprivation (measured by the United Kingdom Index of Multiple Deprivation (IMD) score 2010. The IMD 2010 is an accepted measure of deprivation that is sensitive to changes at a local area, or ward level. There are 38 indicators within seven domains of deprivation, e.g., income, employment or crime. The scores were collapsed into above or below the UK 2010 average IMD score of 21.7)

Change in the level of depression (measured by the change between pre- and post-treatment in PHQ9 scores; Kroenke, Spitzer and Williams, 2001)

Change in the level of anxiety (measured by the change in pre- and post-treatment in GAD7 scores; Spitzer, Kroenke, Williams and Löwe, 2006)

Main cause for referral (the issue identified by the patient on referral. If a diagnosis was recorded on IAPTus this overrode the information from referral. Categories included depression, mixed anxiety and depression, generalised anxiety disorder, health anxiety, obsessive compulsive disorder, panic disorder with or without agoraphobia, post traumatic stress disorder, social phobia, specific phobia, mental disorder not otherwise stated. To increase statistical power, results were collapsed into two categories: depression and anxiety. 'Mixed depression and anxiety' was included in the category 'depression' as depression is seen as more disabling than anxiety and is normally the initial focus of treatment (Grey, 2013))

Risk (lower risk (no and low) and higher risk (medium and high))

Wait time to treatment (measured as number of days from referral to CBT)

Therapist (fully trained and in-training).

Some factors of possible relevance highlighted by the literature review were not routinely recorded on IAPTus and so could not be included in this study. These included employment status, physical disability, co-morbidity and a measure of the therapeutic relationship.

Due to skewed and nominal level data, all comparisons were undertaken using non-parametric Mann-Whitney between-group tests and chi-square tests of association. Additionally, a multifactorial binary logistic regression using the forward likelihood ratio method was performed to assess the capacity of each of these factors (individual, service-level and clinical outcome) to predict CBT drop-out. The completion status (completed CBT or dropped-out) was used as the dependant variable, and factors were used as covariates. When necessary covariates had to be transformed into categorical data to meet the parameters of the logistic regression.

Attendance and clinical outcomes

To investigate the relationship between attendance and clinical outcome, those patients that completed CBT in the June 2011 to June 2012 sample were analysed with regards to attendance levels and changes in clinical outcome measures.

Reasons for non-attendance

For four weeks CBT therapists were requested to ask all current patients who did not attend a CBT appointment without prior notice (DNA) to complete a brief, anonymous questionnaire, which was handed to the patient by the therapist at their next arranged session. The patient was under no obligation to complete the questionnaire and refusal did not influence their treatment. This questionnaire was amended from an existing form designed by the organisation's clinical governance department and contained the question "Which of the following options best describes why you were unable to attend your recent session?"; 8 reasons are presented and a free text response stating "other".

To collect data from CBT drop-outs, a covering letter, questionnaire and a stamped addressed envelope were posted to any patient identified as a drop-out within the June 2011 to June 2012 cohort. The questionnaire was mixed methods and partially replicated questionnaires by Lever Taylor et al.

(2013) and Hunsley, Aubry, Verstervelt and Vito (1999). The first 17 questions required a Yes, No or N/A response and asked about different factors that might have influenced their decision to drop-out. Two open-ended questions then asked the respondents if there were any other reasons for dropping out, and requested ideas for making attendance easier for patients. Answers to forced-choice questions were calculated as frequencies because of low sample size. Open questions were analysed using thematic analysis following the approach by Braun and Clarke (2006). This approach was utilised to identify, analyse and report patterns within the data. The responses were read and re-read with codes noted when appropriate. Codes were then clustered into themes, refined and labelled.

Insert table 1 here

Results

DNA policies and guidance

Existing service guidance concerning non-attendance was reviewed. Two different systems were in place; the statement in the service's operational policy concerning non-attendance and a process map created by the first author the year before. The statement concerning non-attendance in the operational policy stated three consecutive DNAs and then discharge as a rule, however as expressed earlier the statement was not adequate in informing clinical practice. The guidance from the process map suggested using a therapy contract. The therapy contract (designed by the first author the year before) recommended booking five sessions, with the patient having to attend the majority before being offered any more. The contract also stated that two consecutive DNAs would result in immediate discharge. The two concurrent systems conflicted in the advice given. Guidance in the operational policy (three strikes and out) was seen as too vague and did not include cancellations or DNAs that were non-consecutive, whereas the therapy contract was clear and provided easy to follow guidance and management of non-attendance.

From discussion with the business analyst, it became apparent that the system of calculating the DNA rate was not representative of clinical practice. The first discrepancy was that the statistics combined the outcomes for both service providers (the charity and the social enterprise) thus not allowing an indication of the performance of either individual team. It was also noted that, instead of dividing the number of DNAs by the total number of offered appointments, analysts were subtracting the number of cancelled appointments from the total and then using this figure rather than the overall total when dividing the DNAs; thus giving a higher DNA rate. The mean DNA rate over the period June 2011 to June 2012 calculated by the organisation's analysts was 10.84%. This method of calculation was being used as standard across the organisation's services. However, it was highlighted that whilst other services can 're-use' cancelled sessions, a psychological therapy service cannot due to the patients being seen for repeated appointments at the same time each week.

Non-attendance rates

Retrospective sessional data was obtained during February 2013, and attendance rates for the period June 2011 to June 2012 were calculated (see table 2). When compared with the analysts' calculations, which used a slightly different analysis (m=10.84%) the DNA rate (m=8.9%) indicates a reliable methodology. The DNA rate was also calculated by therapist. Ten therapists saw more than ten patients in the period June 2011 to June 2012. DNA rates ranged from 2.8% to 13.1%. The mean was 5.8%; this again indicates the reliability of the methodology as similar results were found using different calculations.

Insert table 2 here

The median number of sessions offered to those completing CBT was 17, with a range of 3 to 29 (mean = 15.91, SD = 5.84). Attendance rates (all sessions actually attended/ total number of sessions offered) ranged from 44% to 100% (med=91%, m=88%, SD = 12%). Changes in the PHQ9 ranged from -8 to 22 points (med=7.5, mean=7.15, SD = 6.00). Changes in the GAD7 ranged from -11

to 20 points (med=7, mean=7.44, SD = 5.64). Attendance rates were then entered as the dependant variable then change in PHQ9 scores entered to form one independent variable and change in GAD7 to form the other. Simple scatter plots were created to indicate parametric qualities. As the data was not normally distributed, therefore non-parametric, a two-tailed Spearman's rank correlation coefficient was undertaken. It was found that attendance rates were not significantly correlated with depression scores ($r_s = 0.121$, $p = 0.153$) and just missed significance when correlated with the level of anxiety ($r_s = 0.165$, $p = 0.051$).

Referrals during this cohort time period were followed during their journey through in care pathway (see figure 1). Out of 358 patients seen for CBT in the time period, 58 were assessed as unsuitable, 32 did not want CBT, 61 dropped out of CBT, 140 completed, and at the time the calculation was undertaken (February 2013), 67 were still in treatment. The completion rate was therefore 39% and the drop-out rate 17%. To check the reliability the drop-out rate per therapist (seeing over 10 patients) during the same time span was also calculated; drop-out rates ranged from 0-32% (med=14%), indicating consensus of drop-out rates irrespective of methodology used. The median number of sessions attended before drop-out was 5 (range= 1-12).

Insert figure 1 here

Characteristics associated with drop-out

To find out the possible factors associated with CBT drop-out detailed data analysis was undertaken utilising both descriptive and inferential statistics. A table detailing all the results is shown in table 3. Dropping out of CBT was significantly associated with higher levels of depression, measured by the PHQ9 ($p = 0.002$), higher levels of anxiety, measured by the GAD7 ($p = 0.027$), higher levels of clinical risk ($p = 0.04$) and higher levels of deprivation, measured by IMD scores ($p = 0.039$).

Insert table 3 here

To meet the parameters for logistic regression, variables were converted into quartiles and a chi square test performed. Through doing this the level of anxiety was not found to be significant (p = 0.08) and was therefore excluded from the logistic regression. The logistic regression indicated that the only variable that independently predicted CBT drop-out was the level of depression as measured by the PHQ9 (change in -2 log (likelihood) of 11.782 (p = 0.008)). This indicates that the level of depression best explains the other effects and that the other variables may actually derive their relationship to drop-out through the level of depression.

Reasons for non-attendance

From 12/03/2013 to 09/04/2013 sixteen patients did not attend a step 3 CBT appointment. Of these, ten were seen again and the questionnaire completed. Six were sent a letter after the missed session and subsequently discharged two weeks later as they did not contact the service. The ten responses are summarised in table 4.

Insert table 4 here

Of the 61 questionnaires sent out to CBT drop-outs, 12 were returned within a six-week time period (20%, which was considered satisfactory – see Viljoen and Wolpert, 2002). Eleven participants completed the forced-choice questions, 10 completed the open-ended question regarding other reasons for dropping-out, and 7 offered suggestions for making attendance easier. The top three reasons respondents indicated were most pertinent to dropping out were: feeling too physically unwell to attend, feeling too depressed or anxious to attend, and difficulty in taking time off work for the sessions. No one reported difficulty in contacting the service to re-arrange sessions, and all participants reported they understood the reason for the sessions. No one indicated feeling worried about what others may think of them for attending and only one reported being concerned about the stigma or shame of attending sessions.

Three main themes emerged from qualitative analysis of the first open question, concerning reasons for dropping out: Priorities, Therapist, and Therapy. Two other themes were only supported by individual respondents and therefore not discussed any further – Losing contact and Achieving recovery.

Priorities – Some[2] of the respondents wrote information related to priorities. This was the most prevalent theme and describes how respondents had more pressing needs and felt that the therapy sessions were not the most important item on their agenda.

"I have a chronic illness (physical) that makes it impossible for me to know whether I am going to be well enough to go anywhere the next day or any day"

(Participant 8)

"My life went from bad to worse…It was a bridge too far to make the sessions" (Participant 1)

Therapist - A couple[2] of respondents described issues with their therapist as the reason for not continuing with sessions. There were perceived competency issues as regards to both the professionalism of the therapist and their ability to form therapeutic relationships. One respondent was extremely unhappy with their therapist and the other made a comparison to the psychological wellbeing practitioner she had seen at step 2.

"The therapist I saw gave me no confidence….she didn't have a clue"

(Participant 6)

"I was not as relaxed with her as compared to X"

(Participant 5)

[2] These terms have been taken from Cooper and Rodgers (2006)

Therapy - A couple[2] of respondents recorded information that is best described by the theme Therapy. Rather than attributing blame for dropping out to the therapist the respondents blamed the therapy itself; with one respondent making a generalisation and the other making an incorrect judgement:

"I wasn't getting any benefits … so I decided not to continue"

(Participant 4)

"CBT is not designed for people with Autistic Spectrum Disorder"

(Participant 3)

A thematic analysis was also considered for the answers given to the second open question that concerned ideas to make attendance easier. However given the small sample size, seven responses, it was more appropriate to group the responses rather than full analysis.

The strongest grouping to emerge was Flexibility; in particular the relationship between appointment times and work:

"If there was more choice re: the timings I would have been able to juggle things around more at work". (Participant 7)

Two other groupings were also evident:

The therapist:

"Make sure your people know what they are doing" (Participant 6)

Administration:

"If people DNA I feel it would be good practice to contact them" (Participant 12)

Current strategies to reduce non-attendance

Scrutiny of the care pathway and discussions with administrators and the service manager revealed several strategies were in place within the service:

- 'Choose and book' system for triage appointments. This was well implemented and perceived to be an effective intervention in reducing non-attendance.
- Text message reminders for triage appointments. This was well implemented and perceived to be an effective intervention (however text reminders were a more recent development and not in place for the June 2011 to June 2012 cohort).
- CBT treatment contract. There was sporadic adherence to this strategy, but when actually used the contract was considered effective.
- Two week contact letters. There was sporadic use of these letters, with some clinicians still sending set appointment letters thus increasing the opportunity for DNA.
- Time limited therapy. The number of sessions offered to clients at the beginning of therapy was 10-12, however the median number of sessions actually offered to completers of CBT was 17, with a range of 3 to 29 (mean = 15.91 SD = 5.839).
- Convenient appointments. Some out of hours appointments for CBT treatment were offered at 8am and 6pm during the working week.

Discussion

Estimating non-attendance

As presented in the results section an overall DNA rate of 8.9% was calculated for the service for the time period under investigation. The DNA benchmark set by the organisation was 5% and the DNA rate suggested from the literature search was between 10% and 20%. The service's DNA rate is clearly well below that suggested from the literature review but some way off meeting the target set by the organisation.

The CBT drop-out rate calculated for the service during the time period under investigation was 17%. This compares favourably to the main standard from the literature review of 25% drop-out (Royal College of Psychiatrists, 2011). Through examining the extensive work undertaken by NAPT

(Royal College of Psychiatrists, 2011) the service's drop-out rate could be described as above average; in the top 51% to 75% of services offering psychological therapy in England and Wales. Also from the NAPT study, the median number of sessions attended before drop-out was two. It was calculated that the service had a higher number of sessions attended on average before drop-out, a median of five. The range of sessions attended before drop-out ranged from one to twelve. This indicates that although the service's drop-out rate is lower than average patients are attending more sessions before dropping out; this has cost implications as more planned sessions are being unused. This may in part be due to the service not having a clear non-attendance policy; the therapists may be offering more sessions than clinically recommended once a patient disengages from treatment. In addition, therapists may be using appointment letters after a no show rather than asking the patient to contact the service.

A significant relationship between attendance and clinical outcomes was not found in this study, although a type II error is possible, and a larger sample size would have been advantageous. However, this result is supported by Hans and Hiller (2013) who found that CBT does not necessarily have a 'dose response': attending more sessions does not necessarily lead to better outcomes, what is important is that therapy is completed.

Characteristics associated with drop-out

The most influential factor associated with CBT drop-out was the patient's level of depression; patients with higher levels of depression were more likely to drop-out. Jarrett et al. (2013) also found higher levels of depression were a predictor of drop-out. Patients who are severely depressed are more likely to suffer from concentration and memory problems, feeling tired, lacking motivation and feeling hopeless. It is therefore unsurprising that these patients are less likely to engage with treatment that requires a high level of motivation and commitment.

The level of anxiety was also found to be different between completers and drop-outs. Mitchell and Selmes (2007) found a difference between anxiety in patients who completed CBT and those who

dropped out, and Lincoln et al. (2005) found agoraphobia to be associated with drop-out. As this study used the GAD7 measure (Spitzer et al., 2006), predominately a measure of generalised anxiety, it is unclear exactly which symptoms of anxiety are related to drop-out. However, if patients are worried about what may happen in therapy or are scared of leaving the house they may be less likely to continue with CBT.

Higher levels of deprivation were found to be associated with increased drop-out, which supports studies by Hillis et al. (1993), Grant et al. (2012) and Self et al. (2005). It may be that patients from more deprived areas have additional social, financial or health related problems and there may be competing demands on their time. Avoidance may be a general coping strategy that is transferred to therapy. If these problems are financial then practical issues such as travelling to appointments might be difficult. Additionally, less time in education or less previous contact with health professionals may mean the rationale for psychological interventions is less clear.

This study suggested that patients who had higher levels of risk to self were more likely to drop-out of CBT. This is not something previously discussed within the literature examined. There are obvious implications for this group of patients if they disengage and are lost to services.

The most common finding from the literature search was that younger patients are more likely to drop-out of healthcare services. This was not supported in this investigation, although this could be because of type II error.

Another finding from the literature not supported by this investigation was the status of the therapist. Swift and Greenberg, (2012) suggest that therapists in training have more drop-outs than trained therapists. Although this was not supported here, what was found was that individual therapists differ in their drop-out rate, from some having no drop-outs in the time frame studied to one therapist having a drop-out rate of 32%. This variation would suggest that there are other factors involved other than the level of training, as such the personality or style of the therapist.

Reasons for non-attendance

Reasons for non-attendance are clearly supported in the literature. This study suggests that forgetting was a major reason for DNA and this is supported many of the studies discussed (Neal et al., 2005; Akhter et al., 2012; Killaspy et al., 2000). Other reasons for drop-out included being too physically or psychiatrically unwell, again this is well supported by the literature (Akhter et al., 2012; Killaspy et al., 2000; Lever Taylor et al., 2013). Finally, work commitments were also found to be reasons for non-attendance in studies by Hillis and Alexander, (1990) and DeFife et al. (2010). The themes that emerged from the thematic analysis (priorities, therapist, therapy, losing contact and achieving recovery) are also supported by the literature. 'Priorities' echoes Maslow's (1943) hierarchy of needs; in that issues such as health or safety need to be addressed before psychological factors. It makes pragmatic sense that people who may have housing, physical health or financial issues put these above their mental health. However, it is often the case that mental health problems can be the cause of, or exacerbate, other problems and if addressed could support resolution of other problems. The other theme to be prominent in the literature reviewed was 'therapist'; however it needs to be remembered that although the comments were subjective they do add evidence to the assertion that clinical success depends on the therapeutic relationship (Wampold et al., 1997).

Current strategies to reduce non-attendance

The service uses several strategies to reduce non-attendance, many of which were supported by the literature review. At the triage stage of the care pathway 'choose and book' and appointment reminders were being used, and in CBT there were some convenient/out of hours appointments on offer.

However, CBT did not utilise the 'choose and book' system. This can lead to patients having to accept appointments that are inconvenient on a regular basis, thus increasing the chances of missed sessions. Having more choice was also reported as desirable on some returned questionnaires. In

addition, CBT did not offer appointment reminders, despite using the same IT software as the triage stage. CBT offered little in the way of flexible appointments; patients were normally seen at the same time each week. However, this is standard practice in psychological therapy in the tradition of psychotherapy. CBT therapists on the whole did not clearly state the time frame for therapy and did not adhere to recommendations (10-12 sessions).

For all appointment bookings, triage, CBT or other interventions, patients were not actively involved in booking appointments in line with the behavioural sciences. The service varied with regards to the quality of the communication between the referrer (general practitioners) and staff, this tended to depend on the diligence and psychological mindedness of the referrer. Overall, conflicting DNA policies were in place. How staff members treated non-attendance depended on their own judgement.

Recommendations

Several practice recommendations were made as a result of this investigation:

Data level: As the literature review indicated that DNA rates tended to vary between 10% and 20%, a request was made to change the organisation's DNA target from 5% to 10%. To set accurate reporting methods that represent clinical accountability, it was recommended to separate the interventions provided by the charity (step 2) and the social enterprise (step 3) in regards to the calculation of the DNA rate. In addition as cancelled appointments cannot be 're-used' it was recommended that they should not be subtracted from the total offered appointments when calculating the DNA rate.

Service level: The creation of a new non-attendance policy was recommended. This would increase the standardisation of administrative and clinical practices concerning non-attendance and also allow future audits to be conducted from a clear baseline. Recommendations were made to display

a poster in the service's waiting room stating the percentage of appointments attended during the month and thanking patients for attending appointments as planned. Administrators were asked to subtly change the phrases used when booking in patients. From: please attend... to: will you please attend...? It was also planned to send a 'Please don't be a DNA' leaflet to all patients once they opted into the service. Due the potential of patient apathy towards being referred by a general practitioner the development of a self-referral system was encouraged as this would indicate a greater motivation towards attending appointments.

Although the status of the therapist, trained or untrained, was not found to be significantly associated with CBT drop-out, the range of drop-outs rates for the therapists was high. It was therefore recommended to interview therapists with either exceptionally high or low drop-out rates. The aims were to identify outliers with particularly excellent practice which can be shared within the service, and to identify outliers with poor practice to highlight training needs.

As forgetting and work/other commitments were found to be the main reasons given for missing appointments (along with poor health) it was recommended to implement a choose and book system for all appointments and to increase range of times available. Text messaging reminders should be given before all appointments. When patients present with higher levels of depression and/or higher levels of anxiety, risk and deprivation then the therapist should be aware of the increased chance of dropping out of CBT. The therapist is recommended to discuss the issues in clinical supervision and decide whether or not to be more flexible in their engagement with the patient; for example telephoning the patient before sessions or after a DNA.

Recommendations were also made to adhere to best practice in audit methodology (NICE, 2002) and involved the dissemination of the study and regular re-auditing.

Progress to date

At the time of writing (March 2014) several recommendations have been implemented. The organisations DNA target and also the calculation of the DNA figure has been changed. A non-attendance policy has been created, ratified and disseminated. The policy stipulated that two week contact letters should be sent after a DNA rather than an appointment letter. The 'Please don't be a DNA' is now routinely sent to all patients. The service is now open to self-referral. The 'choose and book' system has been implemented for all appointments and all patients can opt into receiving text message reminders for all appointments.

The latest available DNA rate obtained from the social enterprise's data analyst was for March 2014 and was calculated to be 6.4%. The DNA rate over time is shown in figure 2. It is clear that the DNA rates reduced from 14.1% in March 2012 to 6.4% in March 2014; the overall trend demonstrates a reduction in the DNA rate. This is a clinically meaningful reduction and is highly likely to be a direct result of implementing the recommendations.

Insert figure 2 here

Discussion

Limitations

Although this study has employed a robust methodology there are limitations. The study utilised the clinical data management programme IAPTus. Although all staff in the services had received training on the system their skills in using it varied. For instance, the care pathway would not be consistently followed and some staff members would see IAPTus as superfluous to their clinical practice. This led to the quality of the clinical data being compromised at times. This study had to perform a lot of data cleansing, which slowed down the study, but also increased the chance of errors, although extra checks were made to account for this.

The response rate for the questionnaire was acceptable but quite low. This could be because the questionnaire contained both open and closed questions. Bowling (2009) suggests that

when designing postal questionnaires the questions should be restricted to closed questions because most responders will not bother to answer open questions. The consequence of having a lower response rate was having a small sample size for the thematic analysis. Sandelowski (1995) puts forward that determining sample size is a matter of judgment based on the function of the data, the research method and the sampling strategy. Given that meaningful data was still produced it can be proposed that the sample size was sufficient.

Implications for practice

Non-attendance is a complicated issue. The generalizability of research findings to clinical practice is difficult as the systems and processes differ widely between services. Despite this consideration studies were found that allowed the generation of standards against which performance could be compared. From this the service was able to make a meaningful assessment of its management of non-attendance, whereas before management seemed arbitrary. The service should be commended for having DNA and drop-out rates lower than the majority of other services discussed in research studies.

CBT is a highly recommended intervention, however it has to be completed to be effective. Having an understanding of some of the factors which might underlie non-attendance and drop-out is important to ensure that patients complete their treatment. Allowances can be made with regards to the attendance agreement or contract if the clinician believes that this will lead to treatment completion. As demonstrated in this study the actual number of attended sessions does not impact on clinical outcomes, it is whether the treatment is completed or not that is the crucial factor in determining good outcomes for the patient.

Although a flexible approach to non-attendance may be advantageous when patients are at risk of dropping out of treatment, adherence to the policy is important for the majority of cases. This helps reduce wasted resources by limiting the amount of non-attended appointments allowed during

treatment. Adherence to the policy would be best measured through an audit process, something now possible as a direct consequence of this study. The way in which the organisation evaluates the performance of the service with regards to the DNA rate is now clear, fair and representative of clinical practice. This will help measure the effectiveness of implementing further recommendations.

Conclusions

This study has improved the administrative and record keeping processes within the service, has made better use of limited resources by reducing non-attendance, has focused clinicians towards managing non-attendance more effectively, and allows for future auditing. However, some variables that may be associated with CBT drop-out were not investigated. In particular it may have been beneficial to study the role of the timing of clinical appointments and the impact of the therapeutic relationship on drop-out rates. One of the main findings of the study was that patients with high levels of depression were more likely to drop-out of CBT. It would be interesting to explore what aspects of depression or symptoms lead to this outcome.

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	Method	Statistical analysis	Aim of data analysis
Estimation of non-attendance	Retrospective sessional data between June 2011 and June 2012 based on intervention Retrospective sessional data between June 2011 and June 2012 based on allocated therapist All referrals between June 2011 and 2012 – current stage at February 2013 All referrals between June 2011 and 2012 – based on allocated therapist	Descriptive statistics (means) Descriptive statistics (frequencies and percentages)	To calculate the non-attendance rates
The relationship between attendance and clinical outcomes	Referrals between June 2011 and June 2012 – CBT completers	Descriptive statistics (median and range / mean and standard deviation) Two-tailed Spearman's rank correlation coefficient	To test for any correlation between attendance and clinical outcomes
Characteristics associated with drop-out from CBT	Cross sectional design. June 2011 to June 2012 cohort of referrals. Independent variables: Completed CBT, Dropped out of CBT. Dependant variables: Age, gender, ethnicity, deprivation, level of depression, level of anxiety, main problem, risk, days from referral to CBT, allocated therapist.	Mann-Whitney U Chi-Squared Logistic regression	To test for significant differences between completers and drop-outs from CBT. To test if any differences are predictors of drop-out.
Reasons for non-attendance	Questionnaire design to patients that DNA a recent CBT session. Questionnaire design to patients who dropped out of CBT during June 2011 to June 2012.	Descriptive statistics (frequencies) Mixed methods: Descriptive statistics (frequencies) Thematic analysis (Braun and Clarke, 2006)	To identify reasons for non-attendance

Table 1 Summary table of data analysis strategy

Intervention	DNA rate	Cancellation rate	Total non-attendance rate
Triage assessment	10.4%	2.2%	12.6%
Step 2	10.3%	13.5%	23.8%
CBT	6%	12%	18%
Counselling	10.6%	11.5%	22.1%
Total	8.9%	11.1%	20%

Table 2 Summary of non-attendance rates according to care pathway stage

	Completed CBT N=140		**Dropped Out** N=61		Test Statistic	*P* * = $p \leq 0.05$
Demographic variables	Median (min-max)	Frequency (%)	Median (min-max)	Frequency (%)		
Age(years)	39 (19-89)		37 (18-63)		U = 4206	0.866
Gender Male Female		 51 (36%) 89 (64%)		 23 (38%) 38 (62%)	$\chi^2 = 0.03$ (1 d.f.)	0.863
Ethnicity (N=181) White British Non-White British		 109 (85%) 19 (15%)		 40 (76%) 13 (25%)	$\chi^2 = 2.415$ (1 d.f.)	0.120
Deprivation Lower than UK 2010 IMD average Higher than UK 2010 IMD average		 109 (78%) 31 (22%)		 39 (64%) 22 (36%)	$\chi^2 = 4.242$ (1 d.f.)	0.039*
Patient variables						
Level of depression (PHQ9)	12 (0-26)		16 (1-27)		U = 3108.5 (1 d.f.)	0.002*
Level of anxiety (GAD7)	14 (0-21)		15 (4-21)		U = 3433.5 (1 d.f.)	0.027*
Main problem Depression Anxiety		 61 (44%) 79 (56%)		 26 (43%) 35 (57%)	$\chi^2 = 0.016$ (1 d.f.)	0.901
Risk Lower Higher		 127 (91%) 13 (9%)		 49 (80%) 12 (20%)	$\chi^2 = 4.209$ (1 d.f.)	0.04*
Service variables						
Days from referral to CBT	104 (8-324)		102 (33-222)		U = 4045 (1 d.f.)	0.661
Allocated therapist Trained In training		 96 (69%) 44 31%)		 45 (74%) 16 (26%)	$\chi^2 = 0.548$ (1 d.f.)	0.459

Table 3 **Results of the statistical analysis of the characteristics associated with drop-out from CBT**

Response	Frequency
"I did not know that I had an appointment"	2
"I had forgotten that I had an appointment"	2
Other – family crisis	2
"I tried to call to let you know that I would not be attending but I could not contact you"	1
Other – I was in court	1
Other – illness	1
Other – I was on holiday	1

Table 4 Responses from the 'missed session' questionnaire

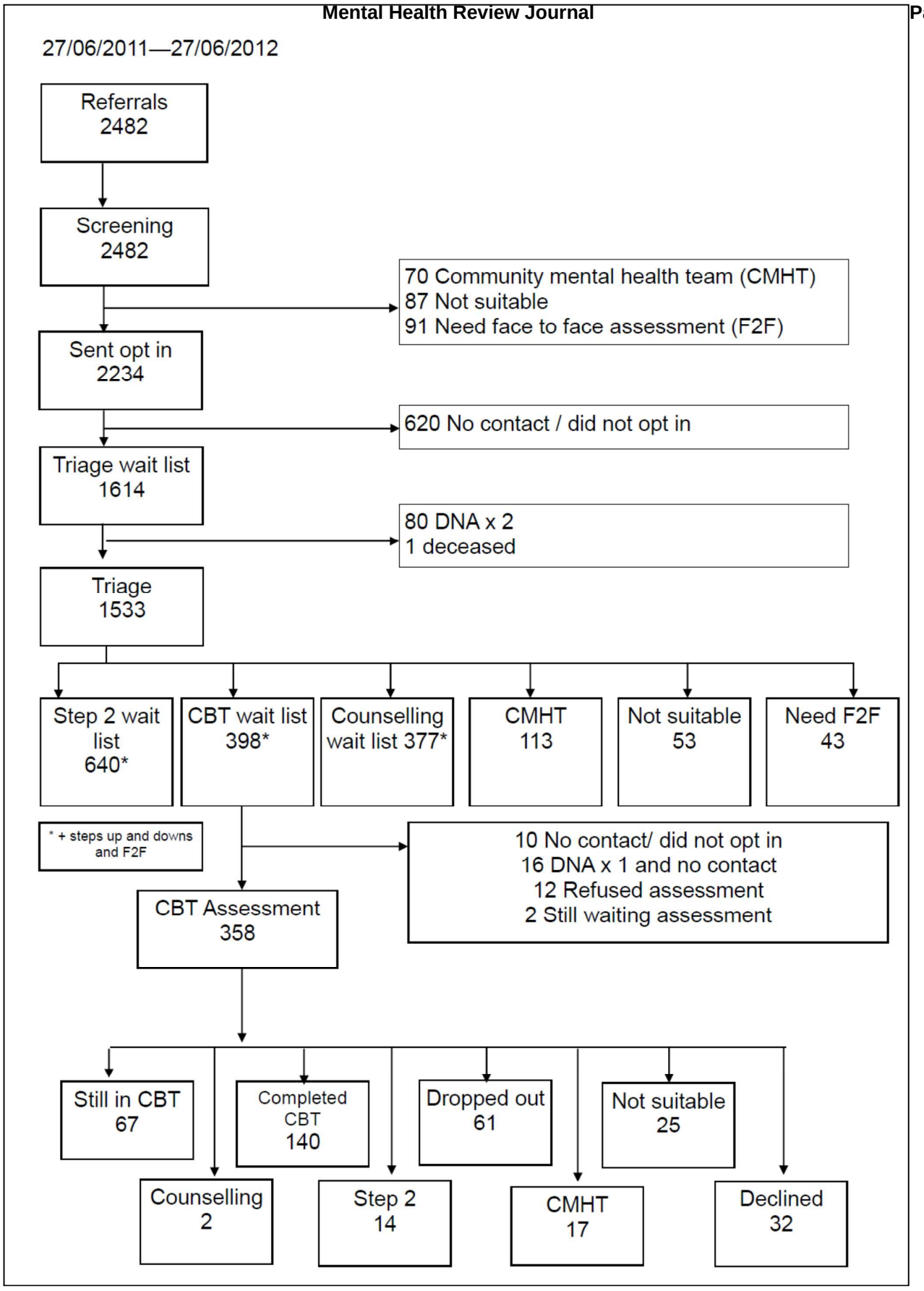

Figure 1 **Diagram showing patients' 'journey' through the care pathway**

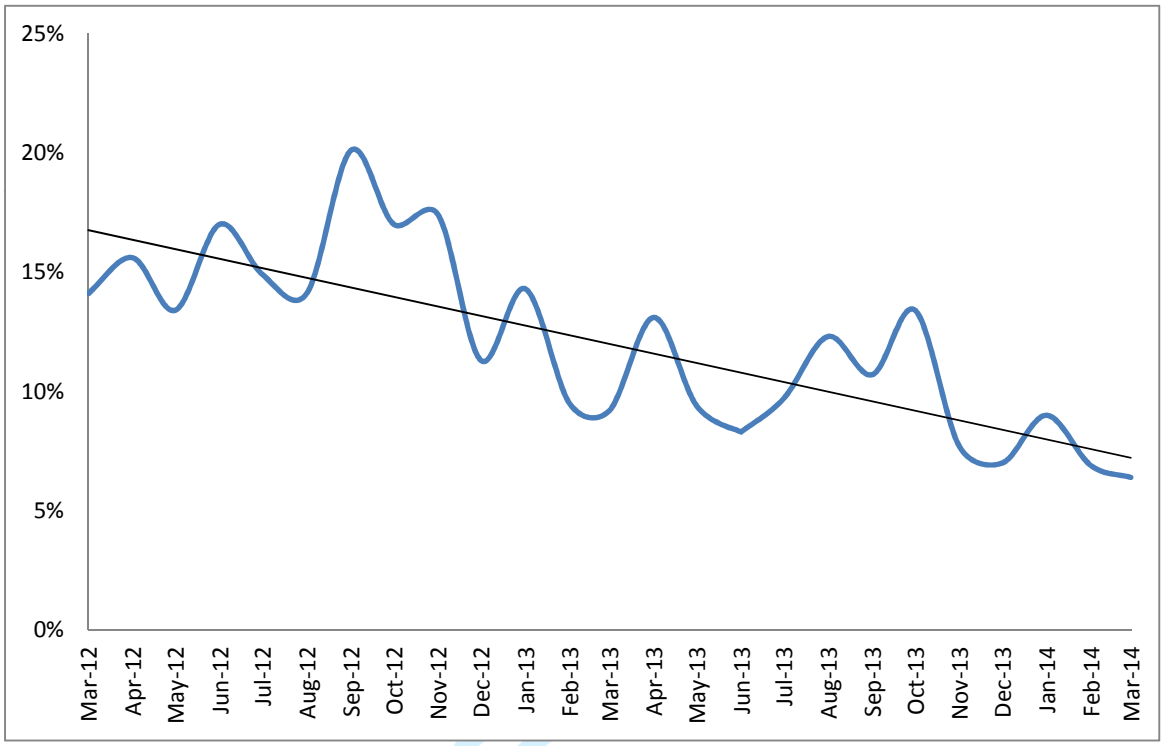

Figure 2 **DNA rate across time**