The Bolton Alcohol Relapse Prevention Project: 20 Month Analysis

Without the mobile system, the keyworker manages patients equally. Potentially missing those about to lapse.

The mobile system helps the keyworker establish who needs the most help and when.
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Foreword

At a time when health and social care services are facing a tough financial regime, it's more important than ever that we find ways to reduce costs, while increasing the value of services. The combined challenges of the financial downturn and increased demands due to the ageing population, increase in long term conditions and the future demands on services being stored up from current eating, drinking and exercise behaviours are potentially creating a ‘perfect storm’ that services in their current form will struggle to weather.

The Health Foundation, an independent charity committed to improving the quality of healthcare in the UK, is working with NHS services through a number of improvement programmes and research projects to understand how services can develop to meet these challenges. One of these programmes is ‘Shine’ which supports small-scale, local innovation. The awards give clinical teams the backing to try out their ideas for innovative approaches to improve the quality of care while saving costs.

The Health Foundation is delighted to have supported NHS Bolton in their Alcohol Relapse Prevention project, which makes innovative use of existing technology to offer a new style of support for people wanting to cut their dependence on alcohol. We commend this report which gives a clear and honest account of how the project was delivered, the challenges along the way and the results. We hope it will help other services who may want to develop support system by mobile phone to understand how such a service needs to be planned and managed, together with the benefits that can result for service users and also for staff, and for the health economy in terms of the better use of resources that can result.

Use of automated text messaging also has potential to be adapted into other fields of health and social care, where on-going links with service users are vital to motivate people and can support aspects of self-management, such as monitoring correct medication use.

Most importantly, the text messaging service has demonstrated tremendous support to people in the alcohol recovery programme, motivating them to stick with it. The feedback from clients is thought-provoking, showing how small steps in personalising services and providing a sense of continuity can help people to make difficult changes in their behaviour. The statistics on the service use and re-referral rates show the benefits that result when people stay with this aftercare programme.

The team at Bolton have shown how using existing technology in an innovative way can make a real difference to improving the quality of care. By helping people to recover from alcohol dependency, the benefits are profound and long-lasting. They affect not only physical and mental health but also employment opportunities, housing choices and relationships with family and more widely with the community.

Helen Crisp  
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Abstract

Aims

Bolton Alcohol Relapse Prevention pilot project aimed to provide alcohol dependent clients with increased support in order to help prevent relapse to previous drinking patterns.

The main objectives for the project were;

• To increase client engagement and retention with the aftercare programme.
• Decrease re-referral rates.
• Reduce the cost to health and social care services associated with repeated treatment episodes.

Design and Measure

All clients who had been referred to Bolton Community Alcohol Team (with an AUDIT score of 20 +) who had achieved their drinking goals and were entering the relapse prevention stage of treatment, were given the opportunity to engage with the project. The number of clients who consented and did enrol was 89 compared to 84 who, for various reasons, chose not to engage. This allowed the project team to compare the outcomes of the two groups.

The project was delivered by the service providers and was never designed as a randomised control trial. Consequently the project team cannot attribute results of the evaluation conclusively to project. However the evaluation and background information illustrate that the project had a positive impact on the service providers and client outcomes.

The service providers monitored client outcomes using “funnels”. An outcome monitoring tool implemented two years previously across the local treatment system and used to identify outcomes and areas of attrition. These funnels were used to inform the evaluation.

Client and keyworker opinions of the project were identified through a programme of focus groups, semi-structured interviews and questionnaires. These qualitative evaluation methods considered effectiveness, person-centeredness, equity, safety and timeliness as fundamental aspects of quality care. Both the questionnaires and semi-structured interviews aimed to measure client’s experience of the project under each of the five areas and were structured accordingly.
Findings

• Engagement rates for clients enrolled in the project were 72% compared to a baseline measurement of 42% (2009/10 figures).
• In year, re-referral rates for clients who had engaged on the project were 2% compared to 9% for those clients who were not engaged with the project.
• Clients who enrolled on the project were found to engage with the services for longer and achieved better outcomes.
• 69% of those engaged on the project completed treatment compared to 41% for those who were not engaged with the project.
• There were positive unintended consequences from the pilot project.

Conclusion

Relapse rates for those recovering from alcohol dependency are high, nationally and locally. Using a remote motivational and monitoring system with mobile phones to enhance existing service provision, can help to prevent relapse to previous drinking behaviour and support improved health and social care outcomes for clients.
Introduction and Background

Relapse prevention is a common concept in the treatment of addiction. There is a wealth of evidence that illustrates the high rates of relapse amongst those in recovery from alcohol addiction. Within the first year after detoxification rates for relapse can be as high as 80-90% (Spada et al 2008), as many as 70% of service users will have relapsed at 6 month follow up (Raistick et al 2006). Aguiar (2012) reviewed a range of studies and estimated that 6 out of every 10 individuals with alcohol dependence will relapse in the six months following detoxification.

The relationship between alcohol dependency, relapse and treatment outcomes is a complex one. Walitzer and Dearing (2006) identified that relapse is a word often used to describe consumption of alcohol at a specified amount, after a period of treatment. Similarly successful treatment outcomes can be recorded when an individual has reduced their alcohol consumption to an identified amount as opposed to an assumed abstinence.

For the purpose of this project and to simplify understanding of this complex phenomenon; relapse is broadly defined as a return to problematic or dependent drinking. Similarly treatment outcomes simply measure whether an individual was alcohol free or had maintained their drinking goals at the point of discharge from the treatment services.

In Bolton, Greater Manchester, the alcohol misuse treatment pathway primarily consisted of a Single Point of Contact, offered by Addiction Dependency Solutions (ADS) and a service for dependent drinkers offered by Greater Manchester West Mental Health NHS Foundation Trust- Bolton Community Alcohol Team (CAT).

Once assessed as alcohol dependent, service users were referred by ADS to the CAT, where they were offered a range of interventions in to help them achieve their stated drinking goals (in the main service users were aiming for abstinence). This included care planning, community and residential detoxification, one to one and group sessions for psychosocial interventions.

Once service users had achieved their drinking goals they were given continued intensive support to attend relapse prevention sessions, both group and one to one (between 3 – 9 weeks on average) at the CAT; then longer term support (up to six months) at ADS. ADS aftercare programme again offered a series of groups and one to one sessions, aimed at supporting clients to sustain changes they had made to their drinking behaviour, amongst a range other activities.

Whilst in treatment with the CAT programme of relapse prevention, service users were provided with proactive, intensive support in order to support their engagement with the relapse prevention work. The intensity of support was gradually reduced as service users became more confident and made progress with their recovery and other health and social issues; service users were expected to take increasing levels of responsibility for their own recovery, dependent on their level of need.
In Bolton the alcohol treatment service providers and commissioners identified an average 75% engagement rate at the CAT for clients entering treatment and completing detoxification. However this pattern suddenly changed once clients had achieved their drinking goals. The 2009/2010 funnel (local outcome monitoring tool) data indicated that only 42% of clients, who had achieved their drinking goals, remained engaged with the aftercare or relapse prevention stage of treatment at the Community Alcohol Team. Furthermore only 17%, engaged with aftercare at Addiction Dependency Solutions.

The service providers also noted a referral rate (within 12 months) of 9% which appeared to confirm their theories that clients were relapsing and simultaneously disengaging from treatment; then re referring for further treatment.

Despite a number of initiatives and good partnership working both the CAT and ADS had failed to make significant impact on improving client engagement with relapse prevention and aftercare.
Consultation with substance misuse practitioners and service users identified a number of factors that were influencing this issue;

- Clients experiencing a lapse and were embarrassed at contacting service providers for support, so just failed to turn up for appointments or respond to telephone calls. Without the necessary support a lapse would quickly lead to a return to previous drinking behaviour.
- Clients often experience a sense of almost euphoria in the immediate weeks following detoxification (referred to as the honeymoon period) that they no longer felt the need for support and disengaged from services.
- Clients failed to put into practice the relapse prevention skills, taught and developed in the one to one and group sessions.

Substance misuse practitioners across both CAT and ADS had worked in partnership to improve and develop service provision to address the issue. A number of initiatives had been implemented and communication between service provider and clients had significantly improved, yet this had minimal impact.

In 2010, d2Digital by Design, NHS Bolton and the service providers applied to The Health Foundation “Shine” programme for funding to deliver an innovative project, using mobile phone technology to support alcohol clients throughout aftercare.

The Bolton Alcohol Relapse Prevention Project was one of 11 projects nationally selected for funding award by The Health Foundation in 2011. ‘Shine’ is an annual programme from the Health Foundation that focuses on innovation, with the aim of improving the quality of care. The challenge set for projects in 2011 was ‘to find new approaches to delivering healthcare that reduce the need for acute hospital care while improving quality and saving money.

Alongside the financial award from The Health Foundation, project teams were offered support with project management and project evaluation from a team of consultants at Springfield Consultancy.
The Project

This project uses web based software interfacing with SMS mobile technology, as a form of engagement to improve communication and between the service providers and the service user. A white paper produced for NHS Bolton had shown that interventions using mobile technologies can be successful in health settings (Kalnina 2010).

The mobile phone is a widely available technology that allows frequent and accurate measurement of use/benefit as well as instant response and engagement. The choice of mobile phone technology as an engagement medium to monitor and help prevent alcohol relapse is innovative and to our knowledge no similar project has been presented in the alcohol field worldwide.

Mobile phones are widely used in the UK with over 84% of the population owning a mobile phone and more than twice as many people using text messaging as a means of communication than any other mobile service (E Consultancy 2010). There is evidence that text messages can be used to enhance service provision and increase self-efficacy (deJongh et al 2008).

The system that was developed by d2Digital by Design in response to this problem in the alcohol treatment pathway in Bolton, it has two main distinct features;

1. Reminders - messages reach the client through SMS and request a response e.g. ‘Are you attending this meeting’ – ‘yes’ or ‘no”. The act of replying ‘yes’ increases the commitment of the client to attend a pre-arranged appointment. This aligns with reciprocity theory (Fehr et al. 2002).
2. Personalised support and monitoring – daily (variable) motivational text questions are sent to the client asking how they are dealing with any cognitive or behavioural issues. The client can respond in one of 3 ways, “reply 1 if you are coping well, 2 if you are experiencing difficulty and 3 if you need support.” The system response is dependent on the client’s response:

1. If a client’s mood/feelings are satisfactory = positive feedback with encouragement to keep up the good work via SMS.

2. Low mood / unease / anxiety has been indicated – client is sent pre-recorded, personalised feedback based on the individualised care plan and psychosocial work that they have developed with the service providers.

3. Client’s responses indicate potential relapse – services get immediate notification and they will respond at the earliest opportunity.

The service providers have access to an internet dashboard where they can monitor client responses either collectively or individually. Client responses are categorised into a R.A.G. system with a “1” response being recorded as green, “2” amber and “3” red.
What does the system look like?

The web based interface is essentially a management system. It allows services to input data relevant to their clients, and they can monitor their responses remotely, thus allowing them to be more proactive where appropriate. They can also use the system to contact the clients directly when required. Two sample screens using fictitious names are shown below.
Personal Profile

This client’s status is RED. Click here to send them a personal response.

Name: Lee
Surname: Mitchell
Preferred Name: Lee
Address 1: 52 Princess Street
Address 2: 
Town: Manchester
Postcode: M1 6JX
DOB: 10/03/1993
Tel: XXXXXXXX00345

Last Survey Sent: 21/03/2011 13:31:06

Status:

Planned Appointments

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/03/2011</td>
<td>14:00</td>
<td>No Response</td>
</tr>
</tbody>
</table>

Add New Appointment

Appointment History

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Keyworker</th>
<th>Stage</th>
<th>Attended?</th>
</tr>
</thead>
<tbody>
<tr>
<td>13/03/2011</td>
<td>15:00</td>
<td>d2Digital</td>
<td>CAT</td>
<td>Yes</td>
</tr>
<tr>
<td>12/03/2011</td>
<td>13:00</td>
<td>d2Digital</td>
<td>CAT</td>
<td>Yes</td>
</tr>
<tr>
<td>11/03/2011</td>
<td>09:30</td>
<td>d2Digital</td>
<td>CAT</td>
<td>Yes</td>
</tr>
<tr>
<td>10/03/2011</td>
<td>13:15</td>
<td>d2Digital</td>
<td>CAT</td>
<td>No</td>
</tr>
</tbody>
</table>

Save
Project Aims and Objectives

The aim of the project was to improve the support offered to clients who struggle with the risk of relapse and increase the chance that individuals leave alcohol misuse treatment having achieved their goals.

The objectives of the project therefore were to:

- Increase the numbers engaging with both the CAT and ADS aftercare services
- Reduce re-referral rates
- Obtain positive feedback about the project from clients and substance misuse practitioners.
- Evidence that the project is cost-effective.

Alcohol misuse and dependency has huge health and social implications for the individual and their families; by supporting clients to maintain abstinence reduce problematic drinking a range of harms and associated costs to society can be avoided. The project team aimed to capture evidence of the cost effectiveness of delivering a project such as this.

The Evaluation

The Relapse Project ran for 20 months from March 2011 to December 2012. The Health Foundation funding of £75K allowed the project to run for an initial 12 months and NHS Bolton provided a further 8 months funding.

Quantitative evaluation

The focus for the initial 12 months evaluation was on the key objectives i.e. increasing engagement, reducing re-referrals and measuring cost-effectiveness, whilst the latter 8 months the project team concentrated on evaluating whether the project had made an impact on successful treatment outcomes.

Data was collected from the web database and the service provider outcome monitoring tools.

In the main, results were obtained by comparing clients who had enrolled on the project (89) to those who declined (84).

This project was not established as a randomised control trial and as a result the project team acknowledge that they cannot conclusively attribute any individual recovery to the Relapse Prevention Project, however the final results strongly suggest that clients who were engaged on the project have achieved significantly better results than those who had chosen not to engage with the project.
Client Profiles

Demographically the two client groups (those who enrolled on the project and those who did not) had similar profiles in terms of age and ethnicity. There were a slightly higher proportion of females in the project enrolled group compared to the non enrolled clients but in both groups the majority of clients were male, which reflects the local treatment seeking population.

We have assumed that the two cohorts were similar in terms of their predisposition to relapse.

Engagement

Engagement is measured as the proportion of clients who, having entered the relapse prevention phase of the service remain connected and engaged with the service and complete their aftercare treatment. The table below shows that there has been significantly improved engagement (using chi square test p<0.05) with CAT for enrolled clients.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measure</th>
<th>Annual totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of people recruited for pilot</td>
<td>Project Dashboard (web database)</td>
<td>89</td>
</tr>
<tr>
<td>Number of people not recruited for pilot</td>
<td>Alcohol Service Outcome monitoring tool</td>
<td>84</td>
</tr>
<tr>
<td>Engagement rates (Enrolled clients)</td>
<td>Web Database</td>
<td>72% (64)</td>
</tr>
<tr>
<td>Engagement rates (Not enrolled clients)</td>
<td>Alcohol Service Outcome monitoring tool</td>
<td>57% (48)</td>
</tr>
</tbody>
</table>

Table 1 Engagement rates
Re referrals

The re-referral rate is a measure of the proportion of clients who, having entered the service during the period March 2011 to February 2012 then re-entered the service a second time before the end of February 2012. In other words it is an indication of the proportion of clients who have relapsed in the very short term. (It does not include clients who may have relapsed but not re-entered the service.)

The data shows that there has been a significant reduction in the re-referral rate amongst clients who have been part of the relapse prevention project (using chi square test p<0.05) as opposed to those who have not.

Based on the evidence for re-referrals below the relapse prevention project arguably prevented 6 short term re-referrals. By comparing the rate of referrals amongst the relapse prevention project group with the non-relapse prevention project group, we can estimate the potential number of re-referrals that may have been prevented if the project had been taken up by all clients in aftercare. We estimate that if all 173 clients had been enrolled, it potentially could have prevented up to 13 (12.6) short term re-referrals.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Re-referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled clients</td>
<td>89</td>
<td>2</td>
</tr>
<tr>
<td>Not enrolled clients</td>
<td>84</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 2 Cohort numbers with Re-referrals

We concluded that this reduction in re-referral and improvement in engagement is because of the improved communication and ‘connectedness’ that the project delivers for both clients and key workers which in turn supports the clients’ recovery.
Cost- Effectiveness

The Relapse Prevention Project has the potential for saving money because increased engagement prevents or delays future relapse and re-referral of clients thereby reducing their future use of health and other services.

These future savings can include any element of health service costs incurred by clients as they revolve around the treatment system (detoxification, emergency admission, ambulance services, inpatients treatment for a variety of alcohol related conditions, primary care services etc.) They also involve a myriad of non health service costs (criminal justice, benefits, housing support etc.)

The estimation of these broad non health costs proved to be difficult to quantify and so we focused our attempts on estimating the cost of treatment journeys within the health sector.

Even here it is difficult to precisely cost packages of care which meets the needs of this diverse client group so we focused on costing up treatment journeys and interventions based on actual staffing costs and the time taken to deliver a range of interventions. We did identify some well recorded case histories but health data was missing in the majority of histories because the data is either held by different agencies (GPs, Ambulance, A&E, Hospital etc.) or has not been recorded at all.

The financial savings that have been estimated for re-referrals are also based on data collected over a relatively short time, i.e. during the 11 month period of the pilot.

We identified 3 broad categories of client based on complexity of need and drawn from known case histories. We estimated the cost of these using typical costs for a range of treatments. These categories served as our ‘most expensive cost case’, ‘medium cost case’ and ‘least expensive cost case’ for estimating potential savings.

- **The Category 3** most expensive cost case £47,415
- **The Category 2** medium cost case £19,912
- **The Category 1** least expensive cost case £14,326

We estimated that the pilot prevented 6 re-referrals and if it had been taken up by all clients in aftercare could have prevented up to 13 re-referrals. For the purposes of the cost calculation we assume that a likely number of re-referrals prevented might be somewhere between these two figures; say 10.
By multiplying this number (10) of prevented re-referrals with the above cost estimates of ‘most expensive cost case’, ‘medium cost case’ and ‘least expensive cost case’, we have a range of potential savings. These are set out in Table 3 below.

<table>
<thead>
<tr>
<th>Estimated Cost based on 10 similar Re-Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most expensive cost case</td>
</tr>
<tr>
<td>Average cost case</td>
</tr>
<tr>
<td>Least expensive cost case</td>
</tr>
</tbody>
</table>

Table 3 Client case history cost and range assuming 10 re-referrals prevented

The following tables show the final estimated savings for the ‘most expensive cost case’, ‘medium cost case’ and ‘least expensive cost case’ when the costs of project implementation have been subtracted. Table 4 shows initial estimated savings, and table 5 shows estimated ongoing savings.

<table>
<thead>
<tr>
<th>Cost/Saving Analysis Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where histories are known and comprehensive</td>
</tr>
<tr>
<td>Projected Saving</td>
</tr>
<tr>
<td>most expensive</td>
</tr>
<tr>
<td>medium expensive</td>
</tr>
<tr>
<td>least expensive</td>
</tr>
<tr>
<td>Expenditure</td>
</tr>
<tr>
<td>H Foundation</td>
</tr>
<tr>
<td>H Foundation</td>
</tr>
<tr>
<td>H Foundation</td>
</tr>
<tr>
<td>Net gain/loss</td>
</tr>
<tr>
<td>£399,150</td>
</tr>
<tr>
<td>£124,120</td>
</tr>
<tr>
<td>£68,260</td>
</tr>
</tbody>
</table>

Table 4 Cost/Savings Analysis Year 1

<table>
<thead>
<tr>
<th>Cost/Saving Analysis - Ongoing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where histories are known and comprehensive</td>
</tr>
<tr>
<td>Projected Saving</td>
</tr>
<tr>
<td>most expensive</td>
</tr>
<tr>
<td>medium expensive</td>
</tr>
<tr>
<td>least expensive</td>
</tr>
<tr>
<td>Expenditure</td>
</tr>
<tr>
<td>H Foundation</td>
</tr>
<tr>
<td>H Foundation</td>
</tr>
<tr>
<td>H Foundation</td>
</tr>
<tr>
<td>Net gain/loss</td>
</tr>
<tr>
<td>£434,150</td>
</tr>
<tr>
<td>£159,120</td>
</tr>
<tr>
<td>£103,260</td>
</tr>
</tbody>
</table>

Table 5 Costs/Saving Analysis Year 2

Note – Year 2 costs include further improvements to the software as part of the extension.
Treatment outcomes

Data was obtained from service providers funnel reports. The care management and aftercare funnels are used to monitor the achievement of milestones by clients as they progress through treatment. The funnels used to record all client journeys through the treatment system starting at the common point of entry and ending in whatever final treatment milestone clients reach.

Clients would typically achieve the milestones sequentially within the care management and aftercare funnel. The data produced includes dates on which each milestone was met (if at all), together with a unique client ID, and a case ID. People who were later re-referred had the same client ID but a different case ID. For the analyses below, case IDs were used as the basis for analysis. Over the full 20 months of the project lifecycle a total of 132 clients engaged with the project.

The relevant milestones in order were:

1. Begin comprehensive assessment
2. Attends assessment
3. Care plan signed
4. Increase in domain scores
5. Maintains Care Plan
6. Achieves goals
7. Engages aftercare
8. Completes alcohol free
9. Agrees after care plan
10. Stability in domains
11. Discharged

Some clients who completed ‘alcohol free’ (milestone 8) were recorded as ‘discharged’ (milestone 11), these were clients who had a legitimate reason not to attend further aftercare sessions; for instance because of work or other commitments but were deemed by their CAT key worker to have completed their treatment i.e. to be fit to be discharged.

The ‘domains’ referred to in milestones 4 and 10 refer to social and health indicators used by the service to assess client’s progress. Each domain is scored between 1 and 5; 1 indicating no problems, 5 indicating significant problems. A minimum of 5 domains are used and these are: Substance Misuse, Physical Health, Mental Health, Family/Carers/Children, Criminal/Legal.
The link between these domains and a client's drinking are manifold. The importance of domains is that they provide a way to measure client's progress in achieving recovery holistically rather than simply by focusing on their drinking.

‘Stability in domains’ refers to the extent to which clients have effectively improved their domain scores and maintained the improvement. 79% of enrolled clients showed stability against improved scores in these domains compared to 39% of not enrolled clients. We can conclude that the project helped clients to sustain not only the changes to their drinking but, indirectly, to positively influence other areas of their life.

The relapse prevention project was offered to clients after ‘achieves goals’ (milestone 6) was reached, so the analyses below includes only clients who were recorded as having reached the ‘achieved goals’ or a later milestone. 58% (470) cases reached the ‘achieved goals’ or a later milestone, of which 113 were pilot project clients. It was apparent that sometimes a milestone was not recorded despite a later milestone having been achieved, and not all cases from the aftercare data could be matched to a record in the case management data, for this reason ‘achieved goals’ or a later milestone was used.

Clients enrolled on the project were significantly more likely to have achieved all subsequent milestones following ‘achieves goals’.

Clients enrolled on the project were significantly more likely than clients who were not enrolled to have ‘discharged’ as their final milestone achieved (69% vs. 41%, significant using chi square test with a conservative sidak correction for post-hoc analyses), and significantly less likely to have ‘achieves goals’ or ‘agrees aftercare plan’ i.e. the earliest milestones as their final milestone (achieves goals: 1% vs. 20%; agrees aftercare plan: 12% vs. 26%).
There were no significant differences in the number of days it took project enrolled clients and non-project clients to achieve individual milestones (calculated from referral date using ‘between subjects one-way ANOVA for the average number of days taken to reach each milestone or drop out out).

Clients enrolled on the project engaged with the service for longer because they reached later milestones than other clients.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>N</th>
<th>Average days (mean)</th>
<th>95% Confidence Interval for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Begin comprehensive assessment</td>
<td>446</td>
<td>46.9</td>
<td>Lower Bound: 41.0, Upper Bound: 52.7</td>
</tr>
<tr>
<td>2. Attends assessment</td>
<td>386</td>
<td>46.7</td>
<td>Lower Bound: 43.2, Upper Bound: 50.1</td>
</tr>
<tr>
<td>3. Care plan signed</td>
<td>371</td>
<td>64.0</td>
<td>Lower Bound: 59.9, Upper Bound: 68.1</td>
</tr>
<tr>
<td>4. Increase domain score</td>
<td>376</td>
<td>84.2</td>
<td>Lower Bound: 78.8, Upper Bound: 89.6</td>
</tr>
<tr>
<td>5. Maintains Care Plan</td>
<td>364</td>
<td>109.9</td>
<td>Lower Bound: 101.9, Upper Bound: 117.8</td>
</tr>
<tr>
<td>6. Achieves goals</td>
<td>350</td>
<td>129.7</td>
<td>Lower Bound: 120.5, Upper Bound: 138.9</td>
</tr>
<tr>
<td>7. Engages aftercare</td>
<td>233</td>
<td>155.0</td>
<td>Lower Bound: 137.2, Upper Bound: 172.7</td>
</tr>
<tr>
<td>8. Completes alcohol free</td>
<td>221</td>
<td>168.6</td>
<td>Lower Bound: 156.3, Upper Bound: 180.9</td>
</tr>
<tr>
<td>9. Agrees after care plan</td>
<td>324</td>
<td>98.3</td>
<td>Lower Bound: 90.0, Upper Bound: 106.7</td>
</tr>
<tr>
<td>10. Stability in domains</td>
<td>230</td>
<td>120.8</td>
<td>Lower Bound: 110.4, Upper Bound: 131.2</td>
</tr>
<tr>
<td>11. Discharged</td>
<td>72</td>
<td>173.1</td>
<td>Lower Bound: 147.6, Upper Bound: 198.6</td>
</tr>
<tr>
<td>Client drops out</td>
<td>111</td>
<td>164.5</td>
<td>Lower Bound: 149.7, Upper Bound: 179.4</td>
</tr>
</tbody>
</table>

Table 5 Milestone Averages
Qualitative evaluations

Sixteen clients participated in semi-structured interviews and 2 client focus groups were held; one at the end of the pilot period (after 1 year), the second at the end of the project (after 18 months). A key worker focus group was held after 12 months. Below we reproduce a few representative responses and some commentary.

Focus groups were facilitated at the start, mid-way through and at the end of the project. Focus groups offered clients and carers an opportunity to discuss their opinions and experiences of the project in an informal manner.

A staff focus group was also facilitated where staff were able to comment on the value of the project, express any concerns, suggest any adjustments and describe the impact the project had upon their workload.

Clients described how they have valued the project in structured interviews and focus group discussions during and after the project. These comments make explicit the improvement in the quality of the service that the project delivers.

“The phone gives me confidence. I back up my messages and go back to them. It [the phone] feels like a part of me.”

“It does not matter that it is automated...you know the work that has gone into creating the messages.”

“Once the message said to find something to occupy myself, I went into garden for 3 hours, and afterwards felt really proud of myself.”

“It made me think differently because it brought back memories of what’s been said to me in the past. Each message triggers a memory.”

Not all clients engaged with the project and the reasons they gave were varied. For instance one client stated that:

“I have a supportive family and felt that the phone wasn’t much use to me.”

The project team recognise that more work needs to be done to understand why some people chose not to try the handsets.

The support the phone provides is beneficial for some clients even after months into their recovery:

“The phone reminds you that you can still relapse – even a year on, you still need to know you can get in touch.”
Some clients did complain about aspects of the project, for instance that messages were repetitious, or that they would prefer a person to speak to at the week-end if they are at risk of relapsing.

However these negative comments have largely been about particular aspects of the way the system is managed and/or set up rather than disadvantages of the project itself. Most of these issues have been dealt with by improvements to the software and in the way it is used.

Key workers also described an improvement in the service and how well the phones have been received by clients.

“It helps them recognise if they do lapse it doesn’t have to go into a full blown relapse.”

On being asked: Have you felt that clients have been receptive to the project? Key workers replied:

“The negatives are just tiny compared to the positives.”

“It has certainly benefited a lot of people. It gets people engaged in the service, it would be really sad [if it did not continue].”

“The phone just keeps reminding them so they don’t get complacent...and think they don’t need support. [It] keeps the focus on not drinking.”

Key workers have benefited, they are able to offer improved support their clients. One worker said:

“If you don’t see your client for a week you don’t know whether they’re drinking or not, if they are getting that text everyday they are more likely to say that they have relapsed [lapsed] rather than to you on the telephone.”

The project provides key workers with better data about their client’s progress. They are able to see if there are patterns in their responses and explore these at the client’s next appointment.

There have inevitably been some challenges for key workers in adapting to the demands of a new project but these challenges have largely been met and are becoming less of an issue as the project has become an integral part of the service.

Overall the positive responses, from clients, carers and staff indicates that the project has had a far reaching impact on the quality of service provision. The support the system offers, encourages ‘all’ clients to feel valued and supported at a crucial time in their recovery from alcohol dependency. Concern had been expressed initially as to whether the project would suit those who had a dual diagnosis (mental health and alcohol). This proved not to be the case and those with a dual diagnosis engaged with the project fully and enjoyed the benefits no less than other clients.

“I really welcomed the concept, because personally I find the relapse prevention work the most difficult. Clients experience a honeymoon period after they have stopped drinking but then their motivation starts to dip and they relapse. This aimed to help clients over that time. Once I started using the system more I could see patterns in the client’s responses and I could contact them to offer support rather than them contact me. Even clients failing to respond to the messages, becomes a warning sign. There was the odd
problem with the system but nothing that couldn’t be sorted out and as we have gone along we have made suggestions on improvements.

We had some difficulties at first making decisions on when to deactivate clients from the system because they hadn’t engaged with it, but I’m getting more confident with that. The project came at a time when there were other major changes to the team and it was difficult at times to support the implementation.”

- AH (Senior Substance Misuse Practitioner).

The Service Providers (CAT and ADS) have benefited from the relapse prevention project by seeing an improvement in outcomes i.e. in the number of clients successfully completing their aftercare courses. This improvement in efficiency does not lead to ‘savings’ as such i.e. a pot of cash to spend elsewhere, since the demand for services continues to outstrip the supply. Nevertheless it should enable more clients to access services and lead to shortened waiting times though we have no evidence of this at the present time.

**Unintended Consequences**

There have been some unforeseen or unexpected benefits. For instance key workers have reported how the process of working with clients to develop individually tailored messages for the message bank contributes to the therapeutic process and improved information about clients’ triggers and moods can be of great value in providing support.

Substance Misuse practitioners have also noted that with experience of using the system they have begun to identify patterns in the responses from individual clients. This has subsequently allowed them to offer timely interventions alongside routine appointments.

The CAT manager has further identified how the system allows for the remote monitoring of all clients at this stage of treatment. Again this allows for improved use of resources, increases client safety and allows for timely interventions. The infographics below illustrate how the system supports this;

*Without the mobile system, the keyworker manages patients equally. Potentially missing those about to lapse.*

*The mobile system helps the keyworker establish who needs the most help and when.*
Conclusion

The problem faced was how to improve a treatment system geared to achieving significant behaviour change amongst a clientele that is prone to relapse.

The use of mobile phones is a novel and untried technology in the field of alcohol relapse prevention. This project capitalised on the fact that mobile phones are becoming ever more central to the way we all communicate so that most clients are familiar with their use.

The project focused on supporting clients in the post-detox phase of their treatment. The alcohol aftercare service has one essential resource; the skills of its key workers. Treatment consists of talking, listening and the passing on of skills, advice, and strategies for living without alcohol. All of this is about communication and the mobile phone was a tool that enhanced and extended the range and frequency of this communication.

The key indicator we have evaluated in this report is the extent to which engagement rates improved for enrolled clients when compared to engagement rates of clients not enrolled on the scheme.

We found that clients enrolled on the project were more likely to achieve goals at all points of the treatment pathway and were more likely to be discharged having completed the aftercare treatment with the Community Alcohol Team. Furthermore the time taken for clients enrolled on the project to achieve their goals showed no increase over the time taken for other clients to achieve theirs and enrolled clients exhibited improved stability in other associated areas of their lives.

Our qualitative data reinforced the conclusion that the project was valued by clients as important communication aid between themselves and the service provider/key worker.

These results suggest that the use of personalised mood/behaviour monitoring SMS technology can make a significant contribution to improved outcomes for alcohol clients in recovery. It also signifies potential efficiency savings for alcohol service providers and commissioners and indirect savings for the wider health and social care economy.

Bolton’s relapse project has undoubtedly enhanced the efficiency of the alcohol treatment system; by utilising mobile phone technology to support evidence based service delivery, more clients have been able to make the necessary changes to their thoughts and behaviours in order to achieve their longer term goals.

This successful and innovative use of mobile phones is not limited to alcohol misuse but can be adapted to any area of health and social care where behavioural change is necessary to support well-being.
Reference List


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Graphical service overview

- Service creates personal questions and/or appointments
- Service and client create personal data
- Computer service system for admin and reports
- Could be extended for access by clients and significant others
- SMS service
  - Personal message
  - Online database and system code
  - Personal response...
  - ...which trigger further responses

Example SMS:

Hi Joe, how are you feeling today?
Reply 1 if good, 2 if not so good, 3 if terrible.
Reply 4/3/11