

The Bridge Project Benzodiazepine Withdrawal Service Evaluation, February 2012

Executive Summary

The purpose of this report is to evaluate the Bridge Benzodiazepine Withdrawal Service, looking at service design, penetration and outcomes. This report refers to issues and solutions which have occurred throughout the period since the service was initiated in 2008, but focuses on the period between April 2011 and February 2012 for which detailed outcomes have been reported.

In the current financial year the service has supported over 100 individuals to reduce their benzodiazepine use with the eventual aim of complete cessation of the medication. In this period, approximately 65% of the individuals seen have achieved sustained abstinence, and between 77% and 95% (depending on the medication type) have achieved either cessation or a medication reduction of over 33% upon discharge. A further 54% of the individuals still receiving support have achieved sufficient levels of reduction in their medication use that if they were discharged at this point they would be classed as a successful outcome.

The unit cost per successful outcome is £725 and the average length of time each individual receives support is 10 weeks – although this can vary significantly depending on circumstances. Further, anecdotal evidence would suggest that a significant proportion of individuals who do not attend the service stop collecting their repeat benzodiazepine prescription once notified that this is under review. Exact numbers regarding this are not available at this time.

Although not consistently available, data would suggest that there is an amount of benzodiazepines being prescribed that is not being taken by the intended recipient. Information has not been forthcoming from the individuals reporting this as to the destination of these tablets, but this is a likely source of leakage into the illicit benzodiazepine market.

Data collected from individuals accessing the service indicate that patients have been prescribed, on average, for over 12 years prior to receiving support. Anecdotal evidence suggests that in some cases the individuals were unaware of the addictive nature of their medication and that the reasons for initially receiving the medication were often not within prescribing guidelines and certainly did not justify the long term use of the drug. Individuals refer to a 'blighted life' as a result of the lack of affect caused by long term use of the drug and anger at what they see as being the effects of the mis-prescribing of the drug.

The report recommends some changes to the design of the service model, emphasising individual GP engagement with the service in order to effect change, and further recommends more information is collected regarding prescribing reasons and the effect that the long term use has had on their quality of life in order that a clearer picture is obtained about the social impact of the over prescribing of benzodiazepines.

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1. Introduction

1.1 Scope and purpose

This report represents an evaluation of the Bridge Benzodiazepine Withdrawal Service (BWS) covering the period from the inception of the service in 2008 until the present day, but focussing mainly on the period between April 2011 and February 2012. The purpose of the report is to evaluate the design and effectiveness of the service in the context of current concerns about benzodiazepine prescribing practices. The report is structured to provide a brief discussion of the concerns and issues around these practices, an evaluation of the service design and a detailed analysis of the outcomes of the service, with particular reference to the current financial year. The report will conclude by making recommendations for any changes in service design and predictions as to the likely continuing impact on benzodiazepine prescribing in the local area.

The predicted audience for this report is the senior management team of the host service, drug workers and managers involved in delivery of the service, individuals involved with the funding of the service and other parties who may have an interest in the development and delivery of like services.

1.2 Definitions:

Benzodiazepines: include any drugs acting on the benzodiazepine receptors, including 'z-drugs' such as zopiclone, zolpidem and zaleplone.

The district: refers to the area covered by Bradford and Airedale Primary Care Trust

GP practice: this is used interchangeably with GP Health Centre. Where individual GP practices are discussed they are referred to by their service code, a non-identifiable number assigned to each when accessing the service.

GP: this does not designate a specific named GP for each individual, as it has often been found to be the case that an individual will see any one of the GPs located within a GP practice. In this document GP is used to refer generically to any GP who has had involvement with the care of an individual, within a practice, unless otherwise specified.

1.3 The history of concerns regarding benzodiazepine use in the UK

The current concern about the level and duration of prescribing for benzodiazepines is nothing new. Indeed, there have been concerns about prescribing practices around benzodiazepines for a number of decades. As early as 1980 the Committee on the Review of Medicines¹ stated that there was little evidence for the efficacious use of benzodiazepines for the treatment of anxiety beyond four months and it was noted even then that a high proportion of patients were receiving repeat prescriptions for extended periods of time. The committee went on to recommend that prescriptions should be limited to short term use.

In 1988, The Committee on the Safety of Medicines² issued a bulletin to prescribing doctors identifying concerns that withdrawal effects were being noted in individuals who had been prescribed benzodiazepines in therapeutic doses for only short periods of time. The committee recommended that benzodiazepines are only used for the short term (2 – 4 weeks only) relief of anxiety that is severe, disabling or subjecting the individual to unacceptable distress; that their use to treat short term 'mild' anxiety was unacceptable; that they should be used to treat insomnia only when it is severe, disabling or subjecting the individual to extreme distress and that in general the lowest dose possible should be used and use should not continue beyond four weeks. Doctors were

¹ Committee on the Review of Medicines (1980). Systematic review of the benzodiazepines. Guidelines for data sheets on diazepam, chlordiazepoxide, medazepam, clorazepate, lorazepam, oxazepam, temazepam, triazolam, nitrazepam, and flurazepam. *British Medical Journal* 280(910-12)

² Committee on Safety of Medicines (1998) Benzodiazepines, Dependence and Withdrawal Symptoms. *Current Problems* 21 (1-2)

further cautioned that using benzodiazepines during a period of bereavement could result in inhibition of psychological adjustment.

In January 2004 the Department of Health³ issued a reminder to all prescribing doctors that benzodiazepines should only be prescribed for short term treatment of between 2 – 4 weeks.

This concern continues today. Despite repeated warnings and evidence that prolonged use of benzodiazepines leads to dependency many individuals in the UK are on long term repeating prescriptions for the drugs. Widespread media attention⁴ has highlighted the issue for the public and increased the pressure for practices to change. In addition, it is evident that in all likelihood the over prescribing of benzodiazepines is contributing to the increase in illicit benzodiazepine use. The combination of these issues makes this an area on which much attention has been focussed.

2. The design and implementation of the Benzodiazepine Withdrawal Service

2.1 Service design

The service was first funded in March 2008 in response to concerns regarding the prevalence of long term benzodiazepine prescribing within the district. The purpose of the service was to offer specialist interventions in primary care settings to enable individuals to reduce or completely stop their benzodiazepine use and to provide a resource for primary care practitioners to help them change their prescribing practices.

The service design called for a lone drug worker with specialist knowledge and experience of working with individuals dependent on benzodiazepines to provide in-reach services to GP practices within the Bradford district. The worker would, in collaboration with the GP, establish a reduction regime for suitable patients based upon the Ashton guidelines⁵. The worker would provide an in-depth assessment followed by a series of structured psychosocial interventions to the patient which would run alongside the continuing reduction in medication. Although seemingly simple in design, the impact of this service has been profound on the individuals engaged but the implementation has not been without its problems.

The process of embedding the service within the district is on-going and is one where participation on the part of each GP practice is entirely voluntary. The process is for the service to identify suitable GP practice and approach the practice manager directly. The practice manager then consults with the GPs within that practice and a decision is reached as to whether or not to access the service. Although there is no direct cost to the GP practices involved, in order to make best use of the service provided it is necessary to provide suitable accommodation for the worker for the period of time they are at the practice and in addition administration support would be required.

2.2 Identifying GP practices

GP practices are targeted using data provided by the Medicines Management department of the PCT. Data was provided on the benzodiazepine prescribing indicators for GP practices within Bradford.

The prescribing indicators used are based upon those developed by the Prescribing Indicators Group which was set up by the Department of Health in 1997. For benzodiazepines a volume based indicator is used which includes all drugs which act on benzodiazepine receptors, including 'z drugs' such as zopiclone, zolpidem and zalepone.

³ Department of Health (2004) Benzodiazepines Warning. A communication to all doctors from the Chief Medical Officer. *CMOs Update* 37

⁴ Check on benzodiazepine-use must be done, say MPs; by Nina Lakhani, 5th December 2010, *The Independent*

⁵ <http://www.benzo.org.uk/ashtonad.htm>

The total average daily quantity (ADQ) of these drugs prescribed by each practice is calculated per STAR-PU (a weighting base system which looks at age and gender when assigning values to each individual) and this is used as an analytical measure of activity with regard to prescribing. The information provided allowed the service to target those practices where prescribing activity was higher than the norm. In this way the service aimed to maximise the impact on district prescribing figures.

2.3 Engaging GP practices with the service

Once a cohort of GP practices was identified, the worker made contact with them to see if they would be interested in utilising the service. Contact was made initially with the practice manager and followed up by visits and presentations to the GPs where this was requested. Although accessing the service was voluntary for practices, in the initial stages reduction of benzodiazepine prescribing carried financial benefits to the practice and so engagement levels were high.

2.4 Setting up the service within each practice

Once a practice had agreed to engage with the service, the worker would arrange for a review of the client list. The list would be filtered by those individuals on long term benzodiazepine prescriptions who did not meet one of the exclusion criteria recommended in the Ashton guidelines. These exclusions include, but are not limited to: those individuals with psychiatric disorders; those over 85 years of age and those with on-going complex needs. It is recommended that GPs screen their own clients to allow them to make clinical decisions about the appropriateness of each patient for reduction.

Once identified, patients deemed suitable are contacted by letter and asked to attend a review appointment with the specialist worker. At this appointment they are asked if they will engage with the worker to reduce and cease their benzodiazepine usage. Those who agree have their reduction managed in collaboration their GP but receive additional support from the worker in order to provide them with the skills and coping mechanisms required to cope with both the withdrawal and the changes in their personal circumstances triggered by the reduction.

2.5 Evaluating the service

Due to the nature of the service, currently available in-house systems of recording and monitoring outputs were not deemed suitable. Therefore a bespoke set of documents were designed to capture the minimum necessary data items. Initially these were based directly on the reporting requirements of the funders and captured only numbers being seen and discharged and demographic information. However, when the service was re-evaluated after being re-commissioned in April 2011, the documents were updated to capture more specific information on the number of contacts, dose reduction and other outcomes.

Other information collected by the specialist worker in the course of providing the service has also been used to inform this report. It is anticipated that these data capture processes will undergo further revision as an outcome of this evaluation.

In general, the current data collected includes:

1. Demographics as declared at assessment (including ethnicity, gender and geographical location)
2. GP declaration of medication and dose at assessment (reflecting the intended use of the prescription)
3. Individual declaration of medication and dose at assessment (reflecting the reality of how the prescription is taken)
4. Length of time the individual has been prescribed prior to assessment
5. Medication type and dose at each subsequent appointment
6. Length of each intervention (which allows total contact time to be calculated)
7. Discharge reason

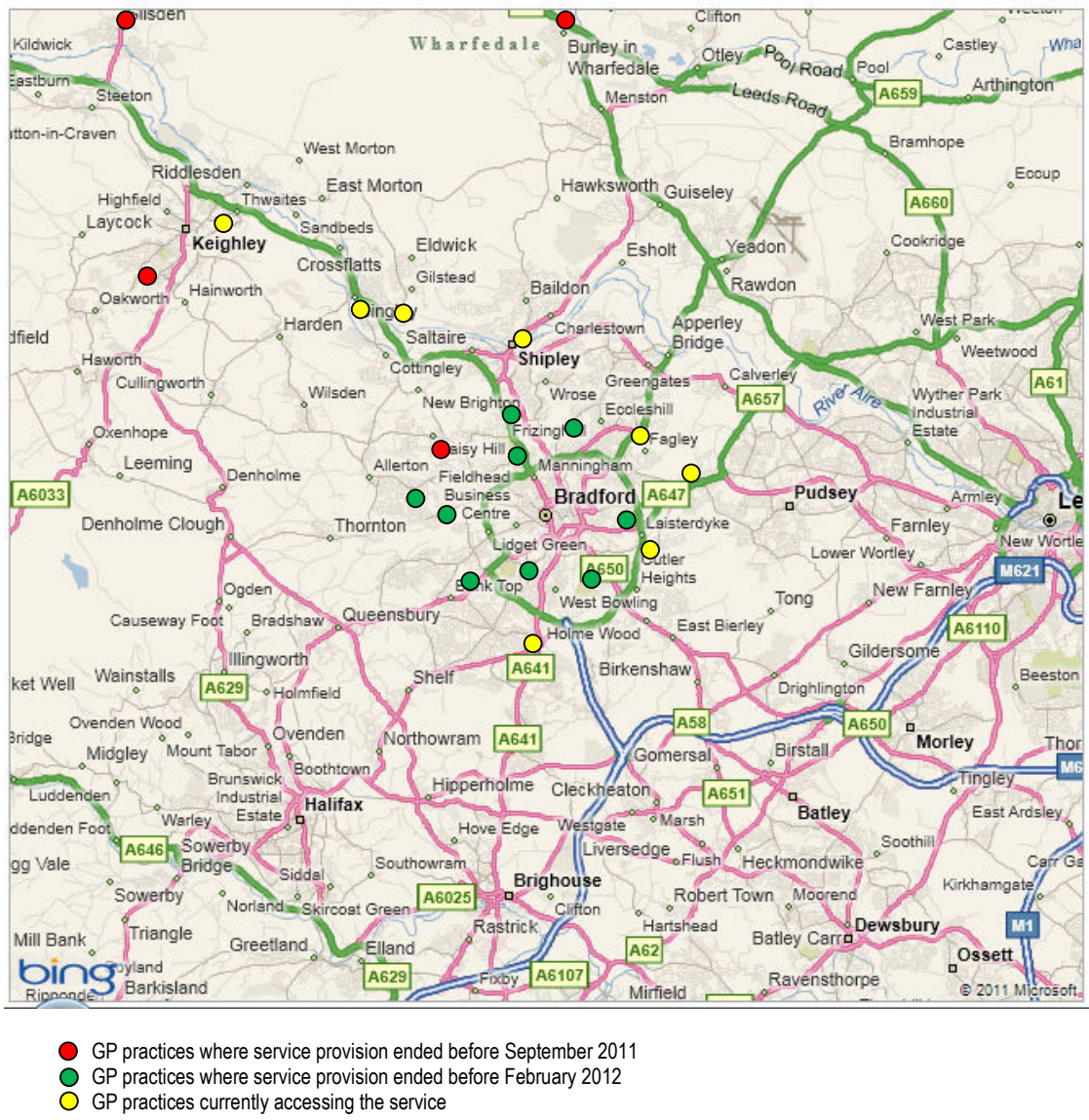
3. Evaluation

The next section of the report details the challenges and successes of the service design and goes on to evaluate the outcomes of the individuals supported by the service in terms of their medication use and, where the information has been provided, the impact on their quality of life.

3.1 Service penetration

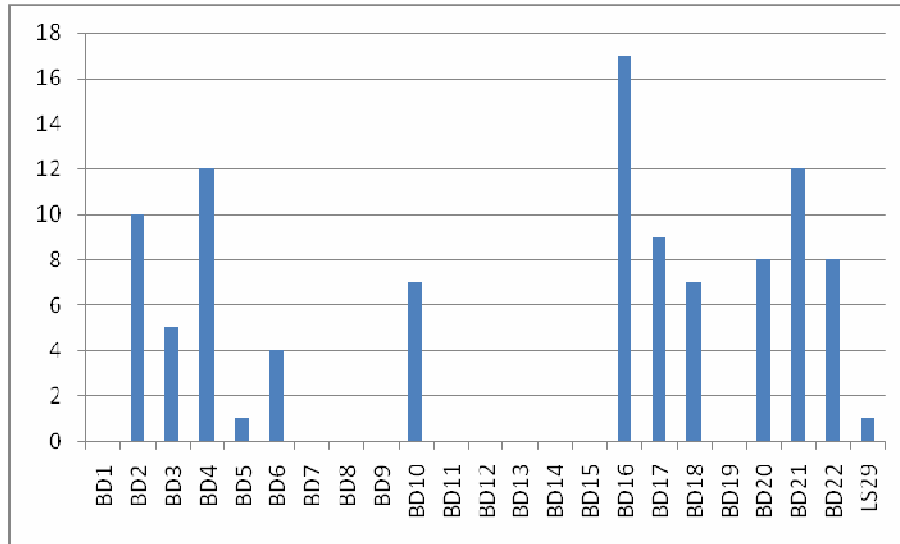
Penetration of local GP practices has been successful in the majority of instances. Initially, GP practices were financially incentivised to reduce their benzodiazepine prescribing, but in the last 18 months this has ceased. In the period up to December 2010, 10 GP practices were approached and all engaged with the service at some point in that period. In the subsequent 12 months a further 11 services have been engaged with the service. The location of these can be seen on Map 1. However, not all approaches were accepted. Two practices identified as having prescribing levels above the norm refused the offer: one stating that their GPs were already working proactively on this issue, and the other not providing a reason for this.

Map 1: Location of GP practices accessing the benzodiazepine withdrawal service



As can be seen from the above map, the service has seen good uptake in the centre of the district, with additional uptake to the north of the district, namely in Keighley, Silsden and Ilkley. The service has managed to access GP practices in most of the more densely populated areas of Bradford, but not all. The following graph shows the distribution of individuals who have accessed the service at their local GPs by postcode area. This has not been shown on a map as the author was unable to find a current map showing postcode boundaries within the city.

Graph 1: Distribution of individuals by postcode



Although no individuals have been seen in some areas, this is a combination of low populations and lower prescribing volumes. In the next phase of the work being undertaken by the service some of the GP practices in these areas will be targeted.

3.2 Initial set up of the service

The variable success of engaging GP practices has influenced the extent to which the service can be offered, although not significantly at this stage. However once it has been agreed that the service is to be provided in a specific practice, there are also other practical issues that occur. Prior to April 2010, the set up of the service was relatively informal and this led to a great degree of inconsistency in the provision at each practice. This would evidence through the lack of preparation by individual surgeries, lack of understanding of which patients to target and no systems being put in place to facilitate this. A review of service procedures at the start of 2010 identified this as a major barrier to the success of the service and led to a review of the procedures used.

From April 2010, newly engaging practices were provided with detailed protocols identifying the individuals who should be screened (those with repeat benzodiazepine prescriptions) and then providing the necessary exclusion criteria. In discussions with the practice manager, practices were encouraged to closely involve the GPs in this process in order for them to come on board with the service.

During the subsequent 12 months, the cooperation of the GP practices in setting up the service has once again been highlighted as a major factor in determining the success of the service at each practice. The major actions identified as being important to the efficiency of the initial set up are detailed below, along with any issues identified and any examples of good practice.

a. Preparation of the initial list of potentially suitable patients

The worker has experienced a variable level of competency when using local IT systems to produce the initial list of patients. When making initial contact the surgery is advised to identify those individuals who are on repeat

benzodiazepine prescriptions and then filter by the exclusion criteria. Despite this, the worker has found that these lists can be incomplete or include patients who should not be there. Informal feedback from administrative staff working within GP practices has identified that some do not know how to manipulate the local IT systems to produce the information required.

b. Filtering of the list to produce the 'target group'

The specialist worker has experienced that each practice has a different way of doing this. Some, as per the item above, have little knowledge of managing their IT systems to filter appropriately, whilst others have insisted that the worker perform this task, which means that many hours are spent manually checking each record for contra-indications prior to any patient-facing work being carried out.

In some practices this is handled very differently. Those practices where the GPs are more actively involved in the running of the surgery see GPs talking through each individual on the list with each other and the specialist worker prior to making a clinical decision based on the circumstances of each. This has a two fold benefit of ensuring the target list is as appropriate as possible and also of actively engaging the GPs in the process of the service.

It is notable that there is a significant difference between the number of individuals initially identified and the subsequent target group in most practices. Based on information from the 6 practices that provided details of all of the individuals on the full list, on average only 32% of this initial group are identified as being suitable for referral (a figure that ranges from 12% to 77% across the practices). Although the exclusion criteria used err on the side of caution, this figure seems surprisingly low and limits the effectiveness of the service within each practice. In addition, the worker provided anecdotal evidence of practice managers producing and filtering the list with no external input, making decisions based on their 'personal knowledge' of the patients – this evidence of lack of clinical input into the process is concerning to say the least.

Many practices have not been forthcoming with the full list of patients pre filtering. This may be for various reasons including the fact that the service has ceased to be offered in some of the practices, and this has limited the analysis possible on these individuals.

c. Informing the target group of the service and inviting them for an appointment

Once again, there are variable methods for doing this once the target group has been identified. Some practices preferred to send out letters with fixed appointments. This resulted in very low initial uptake, and the process has been modified in most practices to asking the patient to make contact in order to book a convenient appointment. In addition, the willingness of practices to issue follow up letters in order to engage as many individuals as possible varied, as did the consequences for non-attendance. In some practices this was ignored and nothing changed, where in others the letter clearly stated that failure to contact the practice regarding their medication could lead to withdrawal of that medication. Where the latter technique was employed this led to a significant increase in the number of respondents.

It is interesting to note that in practices who logged information regarding responses to the invitation letter, between 5% and 25% of those contacted stopped collecting their medication soon after receipt of the letter, either by failure to pick up any more prescriptions, by contacting the practice and letting them know they no longer took the medication or by withdrawal due to non attendance. This figure is surprisingly high in some practices and indicates that there has been significant over prescribing of benzodiazepines.

3.3 Engagement at the initial session

In this section, it was only possible to consider data from those practices that provided details of the full list of patients in the target group. Although age and gender information is collected for all individuals registering with the service, where target group information was not provided by a practice there was no comparison group so this information has been discounted for the purposes of this section of the report.

As noted previously, there was variance in the proportion of the target group who responded to the initial invitation to come for an appointment. Table 1 describes the levels of engagement with the initial appointment in each practice and overall.

Table 1: Engagement with the initial appointment

Practice Code	Number of patients in target group	Number of patients attending first session	Percentage of patients attending first session
2	27	13	48%
5	42	13	31%
12	86	25	29%
13	40	11	28%
21	32	10	31%
25	40	16	40%
Overall	267	88*	33%

*For some practices the number of patients in the target group was not made available to the worker so this figure is a significant under-representation of the total number of patients seen – for the period from the 1st April 2011, 111 individuals attended at least one appointment with the service.

As can be seen in Table 1, on average only a third of the individuals invited to attend an appointment actually came. As noted previously, a proportion of those who did not attend have been listed as stopping their prescription use of benzodiazepines, however as this was not routinely reported an accurate figure cannot be established for this.

When further analysing the difference between the segments of the target group who did and did not attend for a first appointment, the author has focussed on gender and age. Ethnicity was not analysed as this information was only gathered for those individuals who did attend appointments, this was not routinely provided by the GP practices. Table 2 shows a breakdown of the target group by gender and age. This is also represented graphically in Graph 2.

Anecdotal evidence from the specialist worker indicated that age played a significant factor in the tendency not to respond to the invitation to come to a first appointment. The worker reported a perceived tendency for younger individuals not to respond. Graph 2 supports this supposition and further analysis through use of the Student T-Test showed that the difference in the distribution of ages was statistically significant ($p < 0.05$). The graph clearly shows a shift in the distribution of ages such that those individual not attending are generally younger. The peak for non-attendees is between ages 55-64 years, whilst for those attending the first appointment it is between 65-74 years. This distribution is echoed in females; however in males this pattern is less evident.

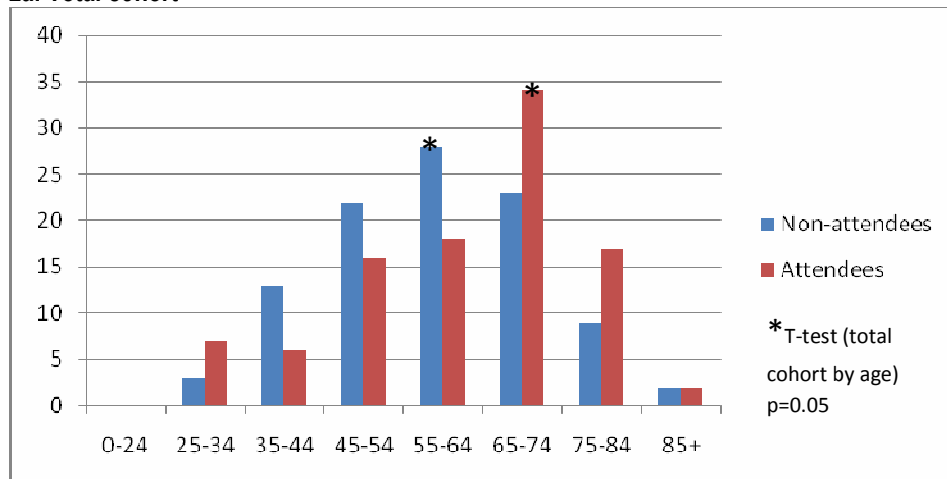
The reason for this shift in distribution is not yet clear as it has not been fully investigated. However it is speculated that the older generation have a predisposition to comply with authoritative requests in a timely manner. This may be habitual or it may be for fear of adverse consequences. It is further speculated that those patients who are younger are less likely to comply for fear of adverse consequences, especially when those consequences are not clearly stated.

Table 2: A breakdown of the target group by attendance, gender and age

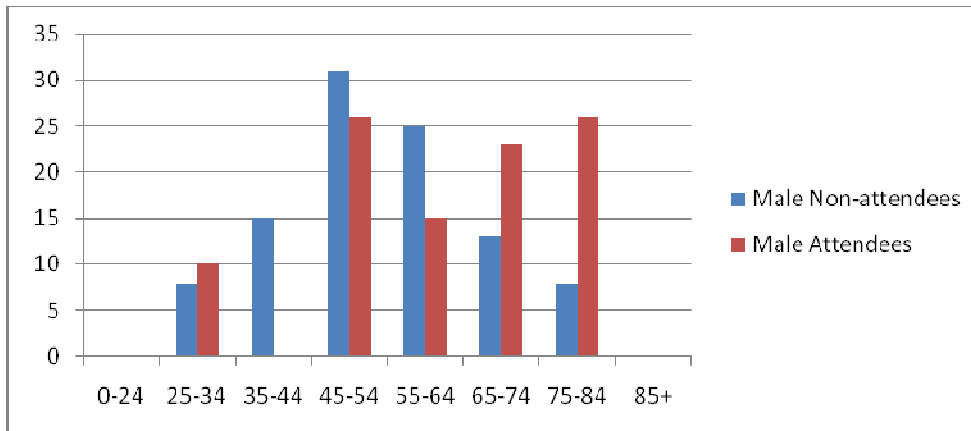
Surgery code	Attendance	Gender		Age at start of support (years)							
				0-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
2	Non attendance	M	4 (29%)			1 (25%)	1 (25%)	1 (25%)	1 (25%)		
		F	10 (71%)			2 (20%)	4 (40%)	2 (20%)	2 (20%)		
	Attended	M	4 (31%)		1 (25%)		1 (25%)		2 (50%)		
		F	9 (69%)			2 (22%)		1 (11%)	4 (65%)	2 (22%)	
5	Non attendance	M	7 (23%)		1(14%)		3 (43%)	3 (43%)			
		F	23 (77%)			5 (22%)	3 (13%)	9 (39%)	6 (26%)		
	Attended	M	2 (15%)					1 (50%)		1(50%)	
		F	11 (85%)		2 (18%)	2 (18%)	3 (27%)	1 (10%)	3 (27%)		
12	Non attendance	M	17 (29%)		2(12%)	3 (18%)	3 (18%)	3 (18%)	2 (12%)	4 (22%)	
		F	41 (71%)		1(2%)	4 (10%)	4 (10%)	12 (29%)	14 (34%)	6 (15%)	
	Attended	M	10 (40%)				2 (20%)	1 (10%)	4 (40%)	3 (30%)	
		F	15 (60%)		1 (7%)		1(7%)	1 (7%)	11 (72%)	1 (7%)	
13	Non attendance	M	7 (23%)			2 (29%)	2 (29%)	1 (13%)	2 (29%)		
		F	23 (77%)			1 (4%)	4 (17%)	5 (22%)	4 (17%)	5 (22%)	4 (17%)
	Attended	M	1 (9%)				1 (100%)				
		F	10 (91%)				1 (10%)	1 (10%)	3 (30%)	3 (30%)	1 (10%)
21	Non attendance	M	7 (28%)			2 (29%)	2 (29%)	3 (42%)			
		F	18 (72%)		1 (6%)	1 (6%)	6 (33%)	6 (33%)	3 (16%)	1 (6%)	
	Attended	M	4 (40%)				2 (50%)			2 (50%)	
		F	6 (60%)				1(16.6%)	3 (50%)	1(16.6%)	1(16.6%)	
25	Non attendance	M	10 (42%)		1 (10%)		5 (50%)	2 (20%)	2 (20%)		
		F	14 (58%)			3 (21%)	3 (21%)	3 (21%)	5 (37%)		
	Attended	M	10 (63%)		2 (20%)		2 (20%)	3 (30%)	1 (10%)	2 (20%)	
		F	6 (37%)					2 (33%)	1 (17%)	2 (33%)	1 (17%)
Overall	Non attendance	M	52 (29%)		4 (8%)	8 (15%)	16 (31%)	13 (25%)	7 (13%)	4 (8%)	0
		F	129 (71%)		2 (2%)	16 (12%)	24 (19%)	37 (29%)	34 (26%)	12 (9%)	4 (3%)
		Total	181		6 (3%)	24 (13%)	40 (22%)	50 (28%)	41 (23%)	16 (9%)	4 (2%)
	Attended	M	31 (36%)		3 (10%)	0	8 (26%)	5 (15%)	7 (23%)	8 (26%)	0
		F	56 (64%)		3 (5%)	5 (9%)	6 (11%)	11 (20%)	23 (41%)	7 (13%)	1 (2%)
		Total	87		6 (7%)	5 (6%)	14 (16%)	16 (18%)	30 (34%)	15 (17%)	1 (2%)

Graph 2: Distribution of target group by age

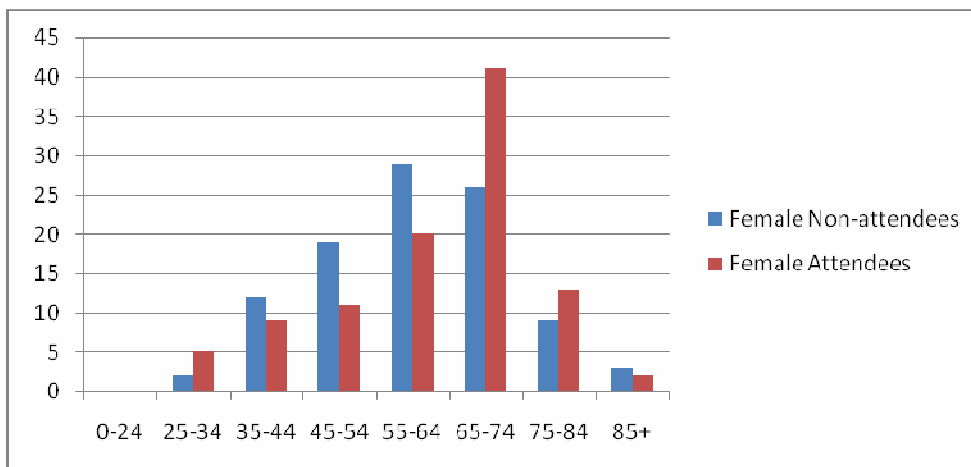
2a: Total cohort



2b. Male patients



2c. Female patients



3.4 Outcomes

The following section details the outcomes of those individuals who have engaged with the service beyond receiving initial advice and information only. Outcomes are measured in terms of proportion of successful discharges (defined as an overall reduction in medication use of 33% or more), length of time receiving support and unit cost. The data contained within this section is compiled from information gathered on those individuals seen after April 2011 – prior to this the information was not routinely collected in a manner compatible with this report. Those individuals whose support was continued from pre-April 2011 have their reduction and outcomes monitored from the start of this reporting period.

One of the main issues affecting the success of the service within GP practices is the level of engagement of the GPs within each practice. Reports from the specialist worker indicate that levels of engagement within each practice vary widely. In some, the GPs take an active role, communicating directly with the worker, ensuring the reductions agreed are undertaken and feeding back on any issues or concerns. In these practices success rates are relatively high. The patient gets a single message about the reduction from sources they trust and so are more likely to complete and cease use. However, this is not the case in all practices. The specialist worker reports that in some practices communication with GPs is less open. In some it is reported that all communication must go through the practice manager, not to the GP directly, and in others the GP does not respond to information provided by the worker, in one instance reporting they did not understand how to use the IT system to access this information. It has not been uncommon that GPs have not been aware of the presence

of the service until the worker attempts to make contact with regard to a reduction regime, indicating lack of information flow within the practice.

In addition levels of engagement vary. The worker has reported GPs ignoring suggestions for reduction plans, despite having invited the service in, leading to confusion and disillusionment from the patient as week after week nothing changes on their prescription. There have also been reports of GPs increasing the dose of medication in contradiction to the agreed reduction regime for little or no reason. Finally the use of locums within GP practices means that it is often the case that a high proportion of the GPs within a practice are unaware of the service and so do not engage with it. All of this serves to highlight the prevalent attitude to the prescription of benzodiazepines, which do not seem to be an item of concern for most GPs.

The following section discusses the outcomes achieved in individual practices and by the service as a whole. For the purpose of this analysis, benzodiazepines are split into two categories – z-drugs (zopiclone, zolpidem etc) which often require use to be transferred to an alternative drug prior to reduction being possible and non-z drugs (diazepam, nitrazepam etc) which can be reduced directly.

3.4.1 Dose reduction outcomes

Table 3 shows a breakdown of the medication prescribed to those individuals engaging in treatment at each practice and their outcomes in terms of overall reduction. Graph 3 shows the distribution of outcomes at discharge. As can be seen, 64% (z-drugs) and 65% (non-z drugs) of those patients who have been discharged from the service achieve a complete reduction from their medication. In addition a further 32% (z-drugs) and 12% (non-z drugs) achieve a reduction of greater than 50% compared to their starting dose. In total, this means that 94% (z-drugs) and 77% (non-z drugs) of patients discharged achieve a positive outcome from accessing the service.

Furthermore, of those patients who are still in contact with the service and who have accessed more than one appointment (39 in total), 54% (21) have already achieved an overall reduction in medication of over 33%, the external target set to define a successful outcome.

Graph 3: Distribution of dose- reduction outcomes

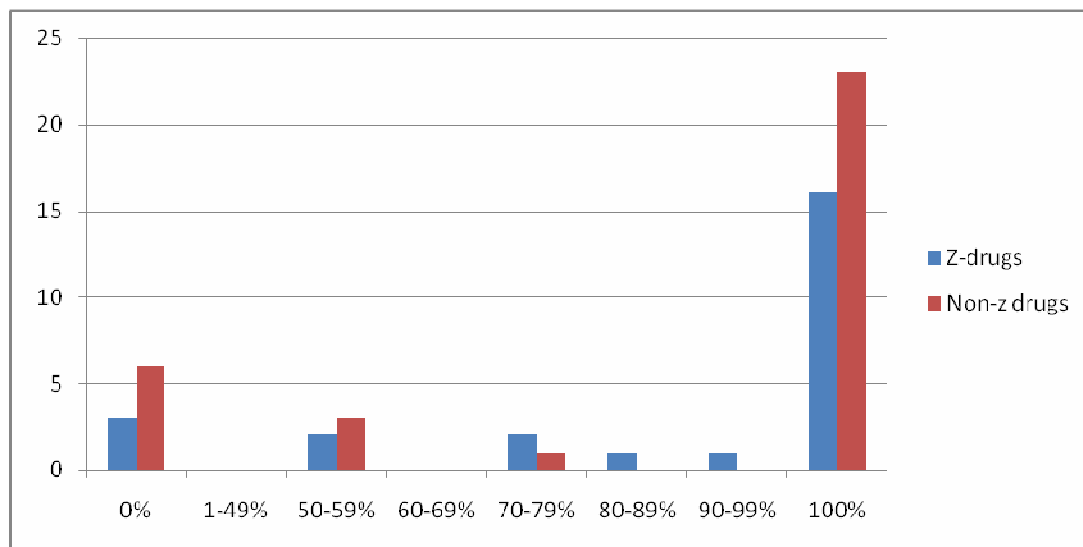


Table 3: Medication reduction outcomes

Surgery code	No of patients attending 1 st appointment	No of patients refusing support after 1 st appointment	Medication type	No of patients accessing only one appointment (not including refused)	No of individuals discharged	No of patients achieving abstinence from medication	No of patients not reduced at discharge	Average reduction of patients reduced (not abstinent) at discharge	Average reduction of patients currently in treatment, having received more than one appointment
2	13	0	z-drug	1	1	1 (100%)	0	na	0
			Non-z drug	1	7	6 (86%)	1 (14%)	na	0
3	8	1 (14%)	z-drug	3	5	5 (100%)	0	na	na
			Non-z drug	1	2	2 (100%)	0	na	na
4	2	unknown	z-drug	0	0	-	-	-	-
			Non-z drug	0	2	1 (50%)	0	55%	na
5	13	0	z-drug	2	4	2 (50%)	1 (25%)	86%	43%
			Non-z drug	0	3	0	2 (67%)	57%	17%
6	3	1 (33%)	z-drug	0	0	-	-	-	-
			Non-z drug	0	2	2 (100%)	0	na	na
7	4	unknown	z-drug	0	4	3 (75%)	0	92%	na
			Non-z drug	0	0	-	-	-	-
8	3	unknown	z-drug	0	1	1 (100%)	0	na	na
			Non-z drug	0	2	0	1 (50%)	50%	na
9	3	1 (33%)	z-drug	0	-	-	-	-	-
			Non-z drug	0	2	1 (50%)	1 (50%)	Na	0
12	25	3 (12%)	z-drug	1	3	1 (33%)	0	50%	22%
			Non-z drug	4	6	4 (67%)	2 (33%)	Na	52%
13	13	2 (15%)	z-drug	0	-	-	-	-	-
			Non-z drug	2	5	4 (80%)	0	75%	15%
21	11	4 (36%)	z-drug	0	3	1 (33%)	1 (33%)	71%	40%
			Non-z drug	2	0	-	-	-	Na
25	16	5 (31%)	z-drug	0	4	2 (50%)	1 (25%)	75%	50%
			Non-z drug	1	2	2 (100%)	0	na	72%
Overall	114	17 (16%)*	z-drug	7	25	16 (64%)	3 (12%)	52%	30%
			Non-z drug	11	34	22 (65%)	7 (21%)	30%	43%

*calculated as a percentage of the no of patients in practices for whom refusal rates have been reported

3.4.2 Length of time in treatment

The average length of time in treatment was calculated as being the difference between the date of the first appointment attended and the discharge date. This has only been calculated for those individuals who accessed more than one session – those refusing further support or agreeing to stop at the first session without further intervention are not included in this section.

The length of time the individual needs to access support was predicted to vary depending on whether the individual needs their medication transferring to a more reduction – amenable type, and also dependant on the starting dose and personal circumstances of the individual. Often, with older patients, there are periods of stand still within the reduction regime to take account of things such as illness or bereavement.

During the period of their time accessing the service the individual will receive a combination of face to face and telephone support from the specialist worker. The flexibility to receive support by telephone means the individual does not need to attend their GP practice every time a reduction in dose is planned or if they have problems they need support with. This has been found to be especially useful when supporting older patients who may have mobility problems.

Table 4 shows the average length of time in treatment of patients who have been discharged from each practice.

Table 4: Average length of time receiving treatment

Surgery code	Medication type	Average length of time in treatment in weeks
2	Z-drug	-
	Non-z drug	3.8
3	Z-drug	15.43
	Non-z drug	2
4	Z-drug	-
	Non-z drug	15.6
5	Z-drug	11.6
	Non-z drug	12.4
6	Z-drug	-
	Non-z drug	14.3
7	Z-drug	11.8
	Non-z drug	-
8	Z-drug	6.1
	Non-z drug	9.2
9	Z-drug	-
	Non-z drug	11.4
12	Z-drug	24
	Non-z drug	10.9
13	Z-drug	-
	Non-z drug	17
21	Z-drug	9.81
	Non-z drug	-
25	Z-drug	6
	Non-z drug	12
Overall	Z-drug	9.5
	Non-z drug	10.0

As can be seen, the average length of time in treatment is between 9.5 and 10 weeks. There is no statistical significance to this small difference as assessed by Student T-Test ($p= 0.75$). When looking at those individuals who have been discharged with a successful outcome, the average length of time in treatment is 10.7 (z-drugs)

and 11.0 (non-z drugs). Once again, this shows no statistical significance ($p=0.55$). It is interesting to note that irrespective of the type of drug the average length of time required to achieve a successful outcome remains the same as it was anticipated that a longer period would be required for z-drugs. This is clearly not the case. It would seem that personal circumstances would play an equal part in determining the length of time required to achieve a significant reduction and so this should be taken into account when planning services.

3.4.3 Unit cost

For the purpose of this report, the unit cost has been calculated in 2 ways:

1. The unit cost for successful outcomes– this includes all successful outcomes - both medication free and reduced by over 33%
2. The unit cost for medication free outcomes – this includes only those individuals who have become medication free

Figures are based on the current total cost of providing the service (until the start of February 2012), and current outcomes. It is not anticipated that there will be a significant change in the proportion of successful vs unsuccessful outcomes for the last 2 months of the period.

The unit cost per successful outcome is £725.

The unit cost per medication free outcome is £953.95 – but this figure does not give a true representation of the total saving provided by the service.

3.5 The extent of the problem

Authors agree that it is difficult to clearly establish the full extent of the problem around prescribing practices and benzodiazepines. Little information is readily available on prescribing practices nationally and little work has been undertaken to establish the reasons why prescriptions have been issued in the way they have, the length of time individuals have been prescribed and the impact this has had on their daily lives. In addition, it is unclear as to the exact extent of the over prescribing – although within this report there were instances reported where the individual stated they were taking significantly less medication than they were prescribed. The specialist worker believes that this was under reported as patients feared the consequences of admitting this. In addition the number of individuals who stopped collecting their prescription on receipt of the invitation to come in for a review, or immediately after the first session would suggest that although these individuals were collecting their prescriptions, they were not consistently taking the medication as prescribed. Potentially, this represents a significant leakage into the illicit benzodiazepine market, whether intentional on the part of the patient or not.

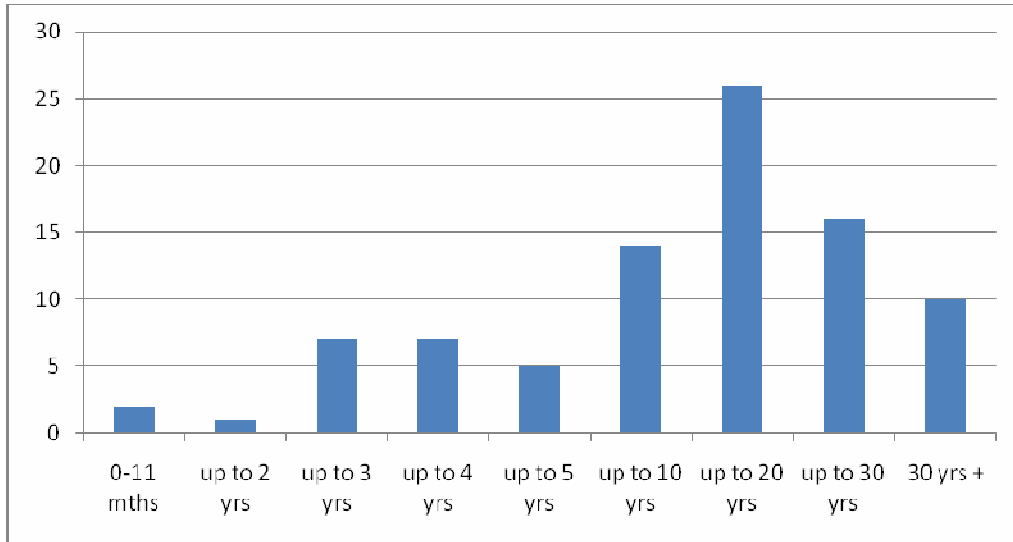
The scope of the data capture systems in place with this service did not allow for routine collection of all of this information, however, some information was provided to the specialist worker as part of the support offered and data was collected regarding the length of unbroken prescribing of medication prior to accessing treatment for those individuals who engaged with an initial session. The small sample of results collected indicates that not only are individuals being prescribed benzodiazepines for months, the reasons they were initially prescribed often no longer apply.

The information collected from 89 individuals indicates that on average, these individuals have been receiving a prescription for benzodiazepines for 154 months (12 years and 10 months) prior to accessing the benzodiazepine withdrawal service. The recommended use of these drugs is for between 2-4 weeks and there have been notifications to prescribing GPs regarding this, and regarding the lack of evidence of their efficacy when used for over 4 months. The fact that reports having received these drugs for such a long period is extremely concerning.

Graph 4 shows the distribution of the reported length of time each individual has received their prescription. It should be noted that this is an approximate, self reported figure and in some cases it was noted that there had

been a break in prescribing - in these cases only the most recent continuous prescription has been counted. This means that the extent of this issue could conceivably be much worse than demonstrated here.

Graph 4: Length of time individuals reported receiving a prescription prior to accessing support



Equally concerning are some of the reasons given for the issue of the initial prescription. These have not been rigorously collected and in many cases it is impossible to check the records to establish the official reason. Individual reasons given to the worker range from post natal depression 20 years ago, to sleeping aids whilst in hospital, abdominal pain, insomnia, mild depression, alcohol dependence, headaches, knee pain and schizophrenia. A few of the repeat prescriptions give 'benzodiazepine dependence' as the current reason for issue but this is not consistent. Many of the reasons given are not those the drug is designed to treat, and certainly those included in the list above do not warrant the use of this drug for over a decade in most cases.

The specialist worker further reports conversations with individuals once they have become medication free where the individuals express significant anger. The worker reports being told that the individuals had no idea that the medication was addictive and many instances where looking back the individual refers to a 'blighted life' where the lack of affect cause by the medication has caused them not to fully engage in family, social and work environments, to what they believe is the detriment of relationships and careers. Again, this information has not been collected in a rigorous manner but these items provide illustrations of some of the impact that the long term use of these medications has had on individual quality of life.

4. Conclusions and recommendations

The purpose of this report was to evaluate the effectiveness of the service design and delivery of the Bridge Project Benzodiazepine Withdrawal Service in the context of current controversy regarding benzodiazepine prescribing practices. This report has found that the service is effective in practices with GP engagement, obtaining successful outcomes for between 77% and 95% of the individuals it discharges at a unit cost of £725. Further, anecdotal evidence would suggest that a significant proportion of individuals who do not attend the service stop collecting their repeat benzodiazepine prescription once notified that this is under review. Exact numbers regarding this are not available at this time however, when combined with other information; this suggests a source of benzodiazepines for the illicit market. It would be useful to collect more information on this but this is unlikely to be accurate as most people seem to fear the consequences of admitting under utilising the medication they receive.

The evaluation has identified a number of areas of potential service redesign, specifically with regard to GP interactions and the collection of data. In order for the service to be most effective it is essential that there is regular contact with all individual GPs within a practice, that they are fully aware of the service being offered, the benefits of the reduction both to individuals and to the practice in terms of cost benefits and that they understand the processes being used. Currently this is variable between practices and this report recommends that the protocols used when setting up the service in individual practices are modified to make the inclusion of GPs in the decision making process mandatory.

There is concern about the low proportion of individuals on repeat prescriptions who are actually referred to the service. It was outside the scope of this report to evaluate the reasons for the difference as information was not provided by the practices on the decision making processes used. It would be useful to have access to clinical information about all individuals on this list in order to reference these decisions as the concern is that some individuals are being inappropriately filtered out, reducing the effectiveness of the service even prior to its initiation.

There are concerns about the relatively low uptake of the service of the individuals on the final target list. A brief analysis confirmed that age may play a role in this, although this is not definite, and other potential influences such as current medical health, ethnicity, dosage and other complicating factors were not investigated due to this information not being made available. Anecdotal evidence from the worker indicates that the manner of offering the service to patients makes a significant difference to uptake, and it is recommended that a standard procedure be developed and made a part of the consistent offer to practices. This would ideally involve asking the patient to make contact for a review at their convenience and putting in place sanctions for individuals failing to respond to the request.

The information gathered about the length of time individuals have been on a prescription prior to accessing support and the reasons for the initial issue are of significant concern. As this data was not rigorously collected it is recommended that the data capture process be modified to allow this, although it is acknowledged that it is unlikely that the official reasons for raising the prescription will be accessible in many cases. In addition, it is recommended that the service be adapted such that patients are asked to take part in a short discharge interview / questionnaire where their experiences of taking the medication and the differences they perceive this has made to their quality of life are discussed in order to start to build a picture of the impact that the long term use of these medications have had on their quality of life.

Overall, the Bridge Benzodiazepine Service is a useful and cost effective intervention that can be accessed by GP practices and has the potential to make a significant difference to the levels of benzodiazepine prescribing in the district if GP practices are encouraged to fully utilise the expertise on offer.