

Intensive day- and home-based treatment for eating disorders: an effective and less expensive alternative to inpatient care



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Summary

Intensive day- and home-based treatments are becoming more available and increasingly recognised as an effective and less expensive alternative to inpatient care.

While more research is needed, a review of the evidence suggests that equivalent outcomes are achieved by intensive day- and home-based treatment compared with inpatient treatment, along with improved patient and family acceptability, and considerable cost savings. Similarly, qualitative accounts of treatment acceptability suggest that it is more palatable to patients, and treatment outcomes are more sustainable.

Despite these advantages, a Freedom of Information request found that just 30 (33.3%) UK eating disorder services provide an intensive day- or home-based treatment which offers the levels of intensity indicated by the evidence as necessary to provide optimum outcomes.

Beat therefore recommends that:

- All NHS commissioners should ensure that evidence-based intensive day- and home-based treatment options are available to meet the needs of all patients with an eating disorder.
- Eating disorder services should be incentivised to develop and test different models of intensive day- and home-based treatment alongside research to evaluate these, so that the models that deliver the best results can be identified and promoted for adoption nationwide.
- Investment in new intensive day- and home-based treatment services should be resourced prospectively in recognition of the cost savings which will be achieved from the resulting reduction in inpatient care.
- Financial savings beyond the costs of setting up and running new intensive services should be re-invested in encouraging and enabling people to seek and start eating disorder treatment at the earliest possible stage in their illness.

Introduction

Intensive programmes, such as Day Treatment Programmes (DTPs) and home-based treatment, are becoming more common in the treatment of eating disorders. While inpatient treatment will always be necessary for the most severe and urgent cases of eating disorders, it also appears to be used for a large number of patients who could reasonably be treated in the community if appropriate options existed. As research suggests the forms of treatment are similarly effective, intensive day- and home-based treatments are a promising, less expensive alternative option to inpatient treatment, which could also be less intrusive to family life. They also allow patients to transfer the skills they learn to their home environment immediately, so helping to create the condition in

which treatment gains are more likely to be maintained.

The NICE eating disorder guidelines (1) recommend that most patients with eating disorders should be treated on an outpatient basis with evidence-based therapies such as eating-disorder-focused cognitive behavioural therapy (CBT-ED) and family based treatments. However, when an individual's physical health is severely compromised, the guidelines recommend that the sufferer is referred to either a medical inpatient or day patient service to medically stabilise them and initiate refeeding where needed.

Despite this, a Royal College of Psychiatrists survey conducted in 2012 found that eating disorder services tend to mainly use traditional models of care, such as outpatient and inpatient treatment, rather than more

innovative models such as day treatment (2). Inpatient units are unevenly distributed across the UK, with large parts of the country having no inpatient beds within easy travelling distance. Many people with eating disorders are therefore admitted to hospitals a very long way from home. Between 2016 and 2018, over 12% of patients in England had to drive over 50 minutes to their nearest adult eating disorder inpatient provider (3). In five regions of England, over 25% had to travel more than 90 minutes to receive this care (3). Additionally, at least 154 patients from England were sent to Scotland for inpatient care between 2016 and 2018 (4).

Travelling long distances to inpatient units adds additional distress to an already stress-burdened family. The increased provision of intensive day- and home-based programmes would both reduce the number of inpatient admissions needed, and provide a step-down from inpatient treatment to avoid patients being kept in hospital for longer than necessary. This is recognised by NHS England's Access and Waiting Time Standard for Children and Young People with an Eating Disorder (5), which states that all community eating disorder services for children and young people should be able to provide day care or intensive home treatment by March 2021. Similarly, NHS England's guidance for commissioners and providers of adult eating disorder services outlines that the optimal model of service delivery involves community eating disorder services providing or supporting day patient treatment for adults (6). No equivalent recommendation yet exists elsewhere in the UK.

Intensive day- and home-based treatment options also have the benefit of being significantly cheaper than inpatient treatment. Analysis of data provided by PwC into treatment costs (7), has shown that the cost of the first year of treatment can be reduced by over £43,000 per patient if they receive treatment immediately and attend an intensive day treatment programme, compared to if treatment is delayed and hospitalisation is required (8). Although the cost of inpatient admissions varies based upon factors such as diagnostic criteria, overhead costs and length of stay, it is indisputably an expensive way for the NHS to deliver treatment (9) in the absence of additional therapeutic benefit. Greater provision of intensive day- and home-based treatment could therefore release funds from inpatient services to invest in helping a greater number of people faster, reducing waiting lists and providing fully resourced intensive treatment programmes for all patients who need them, in all areas of the country.

This document presents the results of a review of the evidence available into the effectiveness of intensive

day- and home-based treatment programmes, along with case studies from four selected established services in the UK. It also reports the results from a Freedom of Information request to all UK eating disorder providers.

What is Intensive Day- or Home-based Treatment?

Intensive day- and home-based treatments are designed to support people with severe eating disorders and those for whom traditional outpatient treatment is not appropriate. They provide increased support compared to traditional outpatient treatment (for example, the provision of meal support and increased intensity of therapy). Unlike inpatient treatment, there is no overnight stay and the patient typically returns home for evenings and weekends.

The programmes typically have the same therapeutic goals and components as inpatient treatment (10). Treatment goals for both inpatient and intensive day- and home-based treatment programmes tend to include medical stabilisation; weight restoration if needed; the cessation of symptoms such as binge eating and vomiting; the normalisation of eating; therapeutic exploration of underlying factors and the development of coping skills; and the initiation of social and vocational rehabilitation (11).

The most common programme is Day Treatment, also known as Partial Hospitalisation Programmes, Day Hospital Treatment or Day Hospital Care (12). Day Treatment Programmes (DTPs) are also the most well-researched and much of this report will therefore focus on this evidence-base. However, other models such as home-based treatment also exist.

NHS England's guidance for commissioners and providers of adult eating disorder services (6) defined intensive day patient treatment as "at least four to five times a week" involving "support around main meals as well as encouraging people to learn skills and engaged in activities that contribute towards their recovery". Similarly, Thornton et al. (13) argued that services should be able to provide a continuum of outpatient care for patients, so a five-day a week programme is available for those with more intensive needs, allowing patients to step-down the intensity of their treatment as required.

Currently, there is considerable variation in programme design, intensity and duration across DTPs (14-19). These differences appear to be due to varying availability of resources and clinical judgement, with little in the way of an evidence base to argue for any

particular programme design over another (20). Matthews et al. (19) reported the need to look at “what was done in other settings” when designing a DTP for eating disorders, due to the inconsistent and limited evidence available in the treatment of eating disorders.

Most existing DTPs take patients with anorexia nervosa and bulimia nervosa, but few take those with binge eating disorder (17). DTPs are delivered using group therapy, which has been suggested to be beneficial when treating eating disorders due to the reduction in patient isolation (21). The optimum size of the programme has been suggested to be eight to twelve places (22), with less than six people in the group reducing therapeutic input and more than twelve being unmanageable.

Why Should Intensive Day- or Home-based Treatment be Considered?

Intensive day- or home-based treatment can be shown to achieve treatment outcomes at least equivalent to those achieved by inpatient or standard outpatient care, with greater treatment acceptability, delivering reduced inpatient admissions, considerable cost savings and increased family empowerment.

1. Equivalent treatment outcomes

Intensive day- and home-based treatments have been found to be effective in the treatment of eating disorders, for both adolescents and adults, with research suggesting that DTPs are at least as effective as inpatient treatment. Hay et al. (18) concluded that there was insufficient evidence for any treatment setting (inpatient treatment, outpatient treatment, inpatient treatment followed by outpatient treatment or day treatment) to be viewed as superior in the treatment of eating disorders.

Adults

DTPs have been found to be effective in the treatment of anorexia nervosa and bulimia nervosa for those over the age of 16 years (10,21,23–36), with treatment effects being sustained over 3 months (29); 12 months (32,37); 18 months (33,38,39); and 26 months (26). For example, an Australian DTP for patients with anorexia nervosa, bulimia nervosa or eating disorder not otherwise specified (EDNOS) was evaluated by Willinge et al. (29) to assess outcomes against seven treatment goals. These goals were: 1) weight gain for underweight patients or weight stabilisation, 2) reduction in eating disordered cognitions, 3) reduction in core beliefs

contributing to the maintenance of the eating disorder, 4) reduction in unhelpful eating disordered behaviours, 5) increasing patient motivation, 6) improvement in patient quality of life, and 7) identification and resolution of perpetuating factors. Of the 58 participants who completed the initial assessment, 44 (75.9%) completed the DTP. All seven treatment goals significantly improved from admission to discharge, with moderate to large effect sizes. At the 3-month follow-up, results either did not significantly change, or continued to improve.

There is also a small amount of evidence to suggest that DTPs may be effective in the treatment of binge eating disorder in adults (26,31). For instance, Hepburn and Clark-Stone (31) evaluated the short-term effectiveness of a UK DTP, which treated patients over 16 years with anorexia nervosa, bulimia nervosa, binge eating disorder, Other Specified Feeding and Eating Disorder, and Unspecified Feeding and Eating Disorder. Of the 14 patients who presented with binge symptoms pre-treatment and who received an adequate dose of treatment (at least four weeks), eight patients (57%) were completely abstinent from bingeing during the last four weeks of treatment (31). Although these studies tend to report on the binge eating behaviours of the whole sample rather than just those with binge eating disorder, this reduction in binge eating episodes is promising.

Although significant improvements are often made throughout treatment, frequently for both DTPs and inpatient treatment these improvements are not to a point of the patient being asymptomatic, meaning that they may still meet the diagnostic criteria for an eating disorder (30–32,40). For example, Fittig et al. (33) performed an 18-month follow-up of patients who had received 16 weeks in a German DTP and 16 weeks of outpatient aftercare for anorexia nervosa or bulimia nervosa. Less than half of patients who had received treatment were classified as fully remitted – 40.2% of patients with anorexia nervosa and 40.4% of patients with bulimia nervosa. As for inpatient admissions, this highlights that the ability to step-down to less intensive community treatment remains important in order to maintain and continue to build upon the treatment gains made.

Adolescents

DTPs have been found to be an effective alternative to inpatient treatment for adolescents with moderate to severe eating disorders (28,41–53). For instance, Ornstein and colleagues (48) retrospectively reviewed 30 adolescents with anorexia nervosa and EDNOS admitted to their Spanish DTP. Significant improvements to weight were made, with 70% of

patients <90% of their ideal body weight on admission, compared to 13% at discharge. Changes to eating disorder thoughts and behaviours also improved significantly across treatment, as did symptoms of depression and anxiety.

Often DTPs for adolescents incorporate key tenets of family-based therapy (FBT), for example, viewing the carers as experts on the sufferer and a crucial resource for recovery. Family-based DTPs for adolescents may require carers to attend mealtimes, bring in food from home, and join meetings with family therapists (44). An example of an American DTP based upon the principles of FBT was evaluated by Marzola (50). Two forms of short-term intensive family therapy were studied: single- and multiple-family therapy for adolescents with anorexia nervosa and EDNOS-restricting subtype. Both forms of intensive family therapy led to significant positive changes in weight and reductions in behavioural symptoms, with 87.8% of patients achieving either full (60.8%) or partial (27%) recovery at the 30-month follow-up.

Initial research by Ornstein and colleagues (54) has also found an American DTP to be effective in the treatment of Avoidant/ Restrictive Food Intake Disorder (ARFID) for patients between 7 to 17 years. Patients with ARFID were admitted to the DTP for an average of 7.03 weeks, and significantly improved in both their psychopathology and BMI. These improvements to weight restoration and eating symptomatology were maintained at the 12-month follow-up (55).

Complex patients

DTPs have been found to be effective for patients with long-term and complex illnesses (37,56). Research by Brown et al. (37) studied the efficacy of an American DTP for adult patients with anorexia nervosa and bulimia nervosa. Nearly half of the sample had an illness duration of more than seven years, and over 90% had psychiatric comorbidities. Following an average of 90 days in the DTP, 40.3% of patients met the criteria for full remission at discharge, and 30.8% met these criteria at a 12-month follow-up. Remission rates among those who had an illness duration of more than seven years were comparable with those of the whole sample.

Similarly, McFarlane et al. (57) studied a Canadian DTP which had been adapted for the treatment of more long term and complex eating disorders by the addition of two individual sessions per week. Rates of treatment response, and relapse rates at 6-months were no different between patients who had greater illness duration, or those with higher levels of depression and participation in more previous

intensive treatments, when compared with those who were viewed as less complex.

Comparison of treatment outcomes with inpatient units

There are very few studies exploring the differences in efficacy between DTPs and inpatient units, however the evidence available suggests that DTPs are at least as effective as inpatient treatment.

A randomised controlled trial comparing inpatient and day treatment for adults with bulimia nervosa was conducted by Zeeck and colleagues (58) in Germany. Both treatments significantly reduced disordered psychopathology, and there were no significant differences between remission rates at discharge or the 3-month follow-up. One year after the end of treatment, there was a significant difference in the improvement of bulimic symptoms, with day treatment being advantageous – 5/15 (33.3%) inpatients deteriorated compared to 1/21 (4.8%) of day treatment patients. Despite this, there was no significant difference in proportion of patients in full and partial remission – 9/15 (60%) inpatients and 10/22 (45.5%) DTP patients were still fully symptomatic (59). After three years, there were no significant differences between patients who had received inpatient treatment and those who received DTP; about one third of patients who were followed up showed complete remission, one third showed partial remission, and one third still met the criteria for bulimia nervosa (60).

Herpertz-Dahlmann et al. (61) compared a German DTP following three weeks of inpatient treatment to continued inpatient care for females with anorexia nervosa aged 11-18 years, in a randomised, non-inferiority trial. The DTP was equivalent to inpatient treatment with respect to increase in BMI and maintenance of this over 12-months, and significant improvements in symptoms were also made across both treatment groups.

Comparison of treatment outcomes with outpatient treatment

Kong (62) compared a Korean DTP to traditional outpatient treatments, including cognitive behavioural therapy and interpersonal therapy, for adults with anorexia nervosa, bulimia nervosa or EDNOS. The randomised controlled trial found that over the same time period, DTP participants showed significantly greater improvement on the majority of psychological symptoms of the eating disorder, frequency of binge eating and purging, BMI, depression and self-esteem scores – compared to outpatient treatments.

2. Greater treatment acceptability

Qualitative accounts of intensive day- or home-based treatments are scarce. However, accounts tend to be positive and highlight that although challenging, they are helpful and acceptable to patients (19,63).

Experiences of NHS Lothian's Anorexia Nervosa Intensive Treatment Team (ANITT) have been collected and analysed from five patients with severe anorexia nervosa who have been in the service for more than two years (64). Many of the comments compared the intensive community model of treatment to inpatient treatment. They expressed the benefits of remaining in the community such as being "a bit more normal" and being "easier to talk" when in their own environment, as well as the outcomes being more sustainable:

"I much preferred it to being in hospital. It helped me more than being in hospital ever did because as soon as I came out of hospital I just lost all the weight again."

Similarly, results from focus groups with six parents or carers of adults with eating disorders and six adults with eating disorders highlighted that better availability and access to specialist outpatient services is preferable to inpatient treatment (3). This was due to reasons such as being able to carry over skills to their everyday environment immediately, less disruption to work, educational and social commitments, and less financial impact to the sufferer and their family. Matthews et al. (19) interviewed 11 patients of an Australian DTP, to learn about their views and experiences of the programme. Patients' expectations of the programme varied. However, most patients viewed the DTP as helpful and all patients reported that their life had improved due to the programme. Patients viewed the programme as favourable to standard outpatient treatment:

"I've come such a long way in such a short amount of time compared to the weekly appointments I was having with my dietitian and my psychologist."

Some patients report negative experiences of hospitalisation which are likely also to occur with intensive day- and home-based treatment since they are linked to challenging the eating disorder, for example, patients with anorexia nervosa feeling a loss of control and distress when refeeding (65,66). However, other experiences may be exacerbated through inpatient treatment. Hospitalisation is also associated with increases in social isolation and a loss of normality, with many patients concerned about re-establishing relationships once discharged (65,67).

Rates of treatment drop-out offer an additional indication of treatment acceptability. Premature drop-out from inpatient treatment is recognised to be high, with Olmsted et al. (12) reporting drop-out rates to

range from 20% to 51%. Similarly, Gowers et al. (68) found patients are more likely to complete treatment when randomised to an outpatient treatment setting, compared to inpatient treatment. Factors such as the patient feeling like they have a lack of choice over treatment (69) and the belief that inpatient only focuses on tackling the symptoms of the eating disorder (70,71) have been found to contribute to these high drop-out rates. Less is known about premature drop-out from intensive day- or home-based treatments, although a review by Hepburn and Wilson (72) reported drop-out to range from 0 to 41% for DTPs. This suggests that although there is wide variability in drop-out rates across treatment programmes, DTPs may fare slightly better.

When comparing treatment drop-out from a DTP based on enhanced cognitive behavioural therapy (CBT-E) to outpatient CBT-E, rates are similar. For example, Garte et al. (34) reported that approximately 24% of patients dropped out of a Norwegian DTP based upon CBT-E, compared to drop-out rates of 19% and 36% for outpatient CBT-E (73,74).

Inpatient treatment has also been criticised for high relapse and readmission rates. For instance, Steinhausen et al. (75) reported that nearly half of adolescents admitted for anorexia nervosa required at least one readmission. Little is known about readmission rates following intensive day- or home-based treatments. However, since patients are required to implement changes in their home environment during evenings and weekends, outcomes may be more sustainable.

3. Reduced hospital admissions and/or length of stay

In circumstances where inpatient treatment is needed, intensive day- and home-based programmes can be utilised to provide a step-down from hospitalisation, thus reducing the length of admission period (1,3,6,10,76). In England, inpatient providers with step-down services such as DTPs have been found to have a significantly lower average length of stay compared to those providers which have no step-down services (3).

Similarly, intensive day- and home-based treatment can also be used as a step-up from standard outpatient treatment and can avoid the need for an inpatient admission (6,29,33,77). For example, Serrano et al. (41) found that the year following the introduction of a Spanish DTP for adolescents with eating disorders, the average length of stay for those in inpatient treatment was reduced from 30 days to 21 days, and 70% of patients who participated in the DTP avoided an inpatient admission completely.

Allowing patients to remain in their home environment or return to it quicker following inpatient treatment maintains elements of 'normalisation', such as social or vocational aspects. This allows therapeutic gains to be transferred and alternative coping mechanisms put in place in the situations which play a role in maintaining the illness, such as family conflict and peer relations (10,78). This was expressed by a patient interviewed about their experience of the ANITT (64):

"I think it's good being in the community... a bit more normal... well if I can do it a little with you guys, then I could maybe eventually go out with one of my friends."

Analysis of a focus group of six parents and carers of adults with eating disorders highlighted concerns that inpatient units were not equipping patients to cope when discharged, due to the focus on restoring someone's weight rather than on their thoughts and feelings (3). This suggests that allowing patients to step down from inpatient treatment into an intensive day- or home-based programme will reduce relapse rates following admission, as patients continue to receive support to help them work on their thoughts and behaviours in their home environment.

4. Lower cost

In addition to allowing patients to stay at home or return to their home environment quicker, avoiding or reducing inpatient admission time also has the benefit of reducing the overall cost of treatment. Research in Germany by Herpertz-Dahlmann et al. (61) compared continued inpatient treatment for adolescent patients with anorexia nervosa to a 3-week inpatient admission followed by DTP. The addition of DTP reduced the cost by about 34% compared to continual inpatient treatment – cost per day for DTP was US\$331 compared to US\$504 for inpatient treatment. This was despite there being no significant differences between treatments with respect to BMI at the 12-month follow-up, or to treatment-related serious adverse events.

Similarly, Williamson and colleagues (79) evaluated the outcomes for patients with severe eating disorders when initiating their treatment in a DTP compared to an inpatient unit in the USA. Patients who were initially assigned to DTP spent significantly fewer days in inpatient treatment (mean = 5.7 days), compared to those who were initially assigned to inpatient treatment (mean = 15.8 days). This reduction in admission time is despite treatment outcomes significantly improving for both groups, with no significant differences between them. Initially assigning individuals to DTP rather than inpatient treatment led to a cost saving of \$9,645 per patient, 43% of the total cost of those who began with inpatient care.

This difference in costs between inpatient units and outpatient services in the treatment of eating disorders is recognised by NICE and is well documented (61,79–81), with hospitalisation being identified as a major contributor towards the cost of illness (9). Intensive community treatments cost the NHS considerably less than inpatient treatment for reasons such as fewer resources required and a reduction in the number of days of intensive service needed (10).

Findings from South London and Maudsley's Trust report that £87,000 can be saved per young person, for admission to an intensive treatment programme rather than an inpatient unit. These savings are due to a difference in average treatment duration, with fewer days in treatment necessary when the young person attends the intensive treatment programme (38 days compared to 196 days in an inpatient unit) (82).

Similarly, research by Munro and colleagues (83) has demonstrated the cost-saving potential of intensive community services. Prior to expanding their service to treat all the local patients with severe anorexia nervosa needing that level of care (2008), NHS Lothian's ANITT cost £370,000 and inpatient admissions cost £918,208, giving a total annual cost of care for people with severe anorexia nervosa of £1,288,208. By 2011, after service expansion to meet demand, the total annual cost had fallen to £896,552, with inpatient costs at £347,552 and the ANITT costing £549,000. Therefore, there was a total annual saving of £391,656 in 2011, compared to 2008. This was attributed to a reduction in the number and duration of admissions.

The cost-benefits of intensive day- and home-based treatments are also apparent when considering that lower BMI is a significant predictor of higher hospital costs. Toulany et al. (84) performed a cost-analysis of a Canadian inpatient treatment for adolescents with anorexia nervosa. They found that for every unit increase in BMI at admission, hospital costs were reduced by 15.7%. Therefore, even when inpatient treatment is necessary, prior support through intensive day- or home-based treatment increases the likelihood that the patient's BMI will, to a certain extent, have been stabilised, thus reducing the inpatient admission cost.

5. Increased Family Empowerment

Families commonly feel disempowered when the sufferer is admitted to an inpatient unit, often reporting that they should have been able to prevent it. They also report feelings of anxiety about how they will manage once the sufferer returns home (8). Traditionally parents may be invited to review meetings or to a weekly family therapy session,

however the inpatient unit staff will be the decision makers. Therefore, when the sufferer returns home, carers are ill-equipped to offer the best support. Although inpatient units are shifting towards adopting a more family-based approach (53), supporting the family to help the sufferer in the community is likely to remain more empowering.

Family-based DTPs have been found to increase parents' self-efficacy and confidence in supporting their loved one (53), with many improvements being maintained at 3-month (55,85,86), and 6-month follow-ups (42,85,87). For example, Girz et al. (85) studied a family-based DTP in Canada, and found that parents' self-efficacy increased during the first three months of treatment, whilst their knowledge and confidence in tackling the illness continued to increase between three and six months post-assessment.

Limitations of Day Treatment Programmes

The use of DTPs rather than inpatient admission is not risk free as treatment is less intensive and offers increased freedom to the patient, so allowing more opportunities for the disordered behaviours to be maintained. This must, however, be set against the risks of patients deteriorating in response to the controlling environment in an inpatient setting, particularly when they no longer need to be admitted for their own safety.

Regardless of treatment approach, medical and psychological risks can be significant among those with eating disorders. Therefore, assessment and management of risk is as central to community treatment as it is to inpatient care.

When someone is at a high level of physical risk, suicide risk or risk due to their home environment, it is likely that inpatient treatment is more appropriate than continuing care in the community, at least until these risks have reduced sufficiently.

A system for assessing specific risk parameters indicating likely acute medical risks that should prompt admission to inpatient care for risk stabilisation was used in the ANITT service. A description of the system (83) and research evaluating safety outcomes from its use (88) have been published.

Additionally, if a patient's home life is unsafe or is driving the illness, then a period away from this may be more beneficial to them. DTPs may also feel like a greater commitment to the patient, due to the

demands of programme attendance such as travel arrangements, which will be a particular challenge in rural areas, and costs (10).

The Policy Context

NHS England's Access and Waiting Time Standard for Children and Young People with an Eating Disorder (5) states that all community eating disorder services for children and young people should be able to provide day care or intensive home treatment by March 2021. An addendum (89) to this standard extends the treatment pathway to include intensive day treatment. Similarly, NHS England's guidance for commissioners and providers of adult eating disorder services (6) states that the optimal model of service delivery for adults with eating disorders involves community eating disorder services being able to deliver or support day treatment to reduce inappropriate inpatient admissions. No equivalent recommendation yet exists in the rest of the UK.

From April 2020, local NHS Provider Collaboratives in England will have newly-delegated responsibility for managing the budgets for inpatient mental health services (90). These partnerships will be expected to minimise the need for inpatient admission, reduce the length of hospital stays and out of area admissions. Any resulting financial savings will be available for investment in improving care locally. While not specifically mandating the adoption of intensive day- and home-based treatment options, this programme appears to create the conditions under which investment in them can be incentivised.

Provision of Intensive Day- and Home-based Treatment by the NHS across the UK

To investigate the provision of intensive day- and home-based treatment programmes across the UK, Beat submitted a Freedom of Information (FOI) request to 97 Trusts and Health Boards providing eating disorder services on 10 January 2019. Four Trusts did not have any specialist eating disorder services, and two Trusts had merged, therefore the total possible responses available were 92.

To analyse the results, a recommended level of intensity was defined from the current evidence-base for effective treatment:

EITHER "providing at least 24 hours of care, spread over four or five days per week including supervised

meal support, over a minimum of four weeks” (for day treatment programmes) OR “at least eight contacts over a minimum of four days per week and an hour or more per contact, including supervised meal support, over a minimum of four weeks” (for home-based programmes).

The results were analysed on 17 April 2019 and are reported in Table 1:

- 90/92 (97.8%) providers responded to the original FOI request
- 43/90 (47.8%) providers reported that they had an intensive day- or home-based treatment option for people with eating disorders.
- 30/90 (33.3%) providers had at least one treatment available which offered the recommended level of intensive day- or home-based treatment.

Table 1	Number of providers who responded	Number providing a recommended level of intensive day- or home-based treatment	
	n	n	%
England	64	21	32.8%
Northern Ireland	5	0	0
Scotland	14	8	57.1%
Wales	7	1	14.3%
Total UK	90	30	33.3%

In England, adult services were more likely to offer the recommended level of intensity than child and adolescent services – 15 providers for adult treatment compared to eight providers for children and adolescents.

As NHS England’s Access and Waiting Time Standards states that all community eating disorder services for children and young people should be able to provide day care or intensive home treatment by March 2021 (5), the 27 child and adolescent providers which do not provide an intensive programme were asked whether they had plans to develop one. Of these, one provider (3.7%) was piloting the provision of a DTP, two (7.5%) were reviewing whether they could provide one, and 24 providers (88.9%) had no plans to develop an intensive day- or home-based treatment. A lack of funding was most often cited as the reason.

In Scotland, the recommended level of intensity was offered by six providers for children and adolescents, compared to five providers for adults. In Wales, one child and adolescent provider offered the

recommended service, compared to zero providers for adults.

Findings from the FOI also indicate a lack of consistency in referral criteria for intensive treatment. For example, some providers stated that they took anyone with a primary diagnosis of an eating disorder, whilst others reported that their programme was for individuals who were at risk of inpatient treatment, and some stated specific BMI criteria that needed to be met.

Conclusion

Intensive Intensive day or home-based treatment has been found to be at least as effective as inpatient care in the treatment of eating disorders, yet is far less costly. It also allows the patient to spend evenings and weekends at home, therefore providing the sufferer with an opportunity to immediately apply the skills they learn in treatment, in their home environment, with less disruption to their lives. This appears likely to make treatment gains more sustainable.

Currently, there is a scarcity of randomised controlled trials or cost-efficiency trials surrounding these treatments. Whilst more research is needed, there is sufficient research- and practice-based evidence supporting the effectiveness, cost-efficiency and palatability of day treatment programmes to justify the necessary investment and impetus for ensuring all eating disorder sufferers in need of intensive day- or home-based treatment are able to access it.

At present, less than half of NHS Trusts and Health Boards providing treatment for eating disorders offer even the minimum level of service required for an intensive programme. A higher proportion of adult services offer this compared to services for children and young people. There is also a lack of consensus regarding optimum programme design and few providers offer more than one level of intensity.

In light of the significant advantages demonstrated, Beat encourages all NHS commissioners to ensure that eating disorder sufferers of all ages in all parts of the UK can readily access an appropriate service. We encourage increased innovation and urge eating disorder services to develop and evaluate new models of intensive day and home-based treatment so that the most effective can be identified and promoted.

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Appendix A: Methodology

This document is comprised of information from three sources:

1. A literature review of publications relating to intensive day- or home-based treatments for eating disorders was conducted. Three databases were searched, Embase, PsycInfo and Medline. Search terms were “eating disorder” AND “day treatment” OR “partial hospital” OR “partial hospitali*ation” OR “day hospital” OR “day hospitali*ation” OR “intensive outpatient service” OR “intensive community”.
2. Case studies of four programmes currently being provided in the UK by the NHS. These services offer different levels of intensity and are described in Appendix B:
 - 2gether Trust Gloucestershire’s Child & Adolescent Home Treatment Team (ChAHTT) – for families and young people with severe eating disorders
 - 2gether Trust Gloucestershire’s Day Treatment Programme – for patients aged 16 years and over for whom community treatment is not appropriate
 - NHS Lothian’s Anorexia Nervosa Intensive Treatment Team (ANITT) – for adults with severe anorexia nervosa
 - South London and Maudsley’s (SLAM) Intensive Treatment Programme (ITP) – for children and young people aged 11-18 years, with predominately restrictive eating disorders
3. Results from a Freedom of Information request.

FOI Methodology

To investigate the provision of intensive day- and home-based treatment programmes across the UK, Beat submitted a Freedom of Information (FOI) request to providers on 10 January 2019.

There is no publicly available national directory of community eating disorder services across the UK to refer to. We sent the FOI to 97 Trusts and Health Boards

which we know provide eating disorder services across the UK. Four Trusts did not have any specialist eating disorder services, and two Trusts had merged, therefore the total possible responses available were 92.

A follow-up question was sent to child and adolescent services in England which replied that they did not provide intensive day- or home-based treatment, asking if they had plans to develop a service aligned to the recommendation in the NHS England Access and Waiting Standard (5).

In order to ensure we obtained information about all relevant programmes we did not define intensive day- or home-based treatment, asking instead for details of the intensity of contact provided. However, when analysing the results, we extrapolated the following definition from the current evidence-base for effective intensive treatments:

EITHER “providing at least 24 hours of care, spread over four or five days per week including supervised meal support, over a minimum of four weeks” (for day treatment programmes) OR “at least eight contacts over a minimum of four days per week and an hour or more per contact, including supervised meal support, over a minimum of four weeks” (for home-based programmes).

Appendix B: Detailed accounts of four intensive treatment programmes

2gether Trust Gloucestershire Home Treatment – The Child & Adolescent Home Treatment Team (ChAHTT)

Who for?

The Child & Adolescent Home Treatment Team (ChAHTT) was developed to support young people and their families with Phase One of Family-Based Treatment. It is designed for adolescents with severe eating disorders who are:

1. At risk of needing an inpatient admission or
2. Returning home for hospital or
3. Whose parents are struggling to implement FBT.

What?

Home Treatment prioritises establishing a regular eating pattern of three meals and three snacks, requiring very active involvement of the patient and at least one parent. This tends to consume a significant amount of time, therefore the young person does not attend school, at least for the first three weeks of the six-week treatment period.

During weeks one to three, a member of the ChAHTT visit the family home to support up to four meals or snacks each day, for five days a week. Changes are made to the young person's meal plan every week, and parents are empowered to make decisions with support from staff. After three weeks, progress is reviewed; families are usually in a position where the intensity of support can be stepped down, so parents

are empowered to take charge. This step down approach continues between weeks four and six.

As well as meal support, the ChAHTT also provide psychosocial interventions, such as motivational exercises, psycho-education with both the young person and their parents, and distraction techniques.

Results

A service evaluation was conducted to assess the effectiveness of the ChAHTT, via a retrospective case note review of 33 patient records. All patients completed the full six weeks of the ChAHTT programme between 2010 and 2018.

Demographics

- Mean age of patients at referral: 14.6 years
- Diagnosis: 88% anorexia nervosa, 6% bulimia nervosa, 6% OSFED

Outcomes

- Number of possible inpatient admissions avoided following referral to the ChAHTT: 23/33 (69.7%)
- Number of inpatient admissions reduced in length of stay following the programme: 2/10 (20%)

For more information about the service, please contact Sam Clark-Stone: sam.clark-stone@nhs.net

2gether Trust Gloucestershire Day Treatment

Who for?

Day Treatment is a group programme, with a maximum of 12 places. It consists of two pathways, and towards the end of the programme patients commence individual CBT-E:

1. Symptom interruption: Patient is admitted to Day Treatment for between two and six full weeks plus two step-down weeks.
2. Weight restoration: Patient is admitted to Day Treatment until they restore to a BMI of between 19 and 20 (not time limited), plus two weeks of weight stabilisation, plus a minimum of two weeks step-down.

Patients are referred to the Day Treatment Programme (DTP) if they are aged over 16 years and have a clinically severe eating disorder. Day Treatment is offered if outpatient treatment is deemed inappropriate because the

patient is too ill and/or community treatment has failed, or if the patient is transitioning between inpatient treatment and outpatient care. Patients are excluded from Day Treatment if they are exhibiting acute suicidal ideation/behaviour, acute psychosis, or uncontrolled substance dependence.

What?

Day Treatment runs five days a week, for between six and 8.5 hours a day. During these hours, patients eat two meals and one snack (thus being expected to manage the other meal and two snacks at home), and receive group sessions including meal planning, psychoeducation and social eating. Weight is measured twice weekly, and for those restoring their weight, a gain of 0.5 to 1kg is expected. Patients are discharged back to the community team immediately if there is one episode of vomiting

on site or they fail to finish a meal or snack during the programme. At least one family or partner session is offered.

Results

In an 18-month study period, 61 patients of mixed eating disorder diagnoses were referred to the DTP; six of these patients terminated treatment before participation to the study was offered, and three people declined to participate. Of the 52 participants remaining, 32 were underweight at the beginning of treatment (BMI < 20) so were enrolled on the weight restoration programme, and the other 20 were enrolled on the symptom interruption programme.

For data analysis, the underweight group was comprised of people with BMI < 19, and participants needed to have a baseline symptom frequency of four or more episodes per month to be included in the symptom-change analyses. Based upon these criteria, 27 participants were underweight, 18 participants had binge symptoms, 19 participants had vomit symptoms and 10 participants were both binge eating and vomiting when admitted.

Demographics

- The mean age of the 52 participants was 27.1 years.
- 98% of participants were female.
- 100% of participants were White British.
- As diagnosed by the DSM-5 (91): 33% had restrictive anorexia nervosa, 13% had binge purge anorexia nervosa, 5% had bulimia nervosa, 6% had binge eating disorder, 33% had OSFED.
- 77% of participants had previously received treatment.

Engagement

12/52 (23.1%) participants terminated day treatment prematurely, for reasons such as non-compliance with DTP rules or the patient decided to leave.

The average treatment duration for the whole sample was 8.7 weeks; this increased to 11 weeks for those who were deemed to have received an adequate dose of treatment (having attended at least four weeks). Of those who received an adequate dose of treatment, average duration for the symptom interruption group was eight weeks, and for the weight restoration group, 12.9 weeks.

Participants who went on to complete an adequate dose of treatment had significantly more severe

symptoms at baseline than those who dropped out in relation to psychosocial impairment, global eating disorder psychopathology, and weight concerns.

Outcomes for those who received adequate treatment:

Disordered behaviours

Participants who were underweight at admission had a significantly greater BMI at discharge. Mean BMI shifted from 16.5 at admission to 18.7 at discharge. Of the 20 participants who were defined as underweight at admission, 8 (40%) had restored their BMI to ≥ 20 .

Participants with binge symptoms on admission had significantly fewer binges at discharge. Of the 14 participants who presented with binge symptoms at admission, eight were abstinent from bingeing during the last four weeks of treatment (57%).

Participants who presented with self-induced vomiting symptoms on admission had significantly fewer episodes at discharge. Of the 15 participants who presented with vomiting on admission, seven were abstinent during the last four weeks of treatment (47%).

Of the 10 participants who presented with both binge and vomit symptoms pre-treatment, four were abstinent from both during the last four weeks of treatment (40%).

Disordered attitudes

Participants who received an adequate dose of day treatment reported significantly fewer eating disordered attitudes, as measured by the EDE-Q, across the global score, dietary restraint, eating disorder, shape concern and weight concern.

Psychosocial impairment

Participants who received an adequate dose of day treatment demonstrated significant improvement in psychosocial impairment, as measured by the Clinical Impairment Assessment. The largest effect size was on participants' ability to concentrate and eat with others.

This case-study reflects service outcomes gathered from research and evaluation projects spanning 2013 to 2015. (31)

For more information about the service, please contact Sam Clark-Stone: sam.clark-stone@nhs.net

NHS Lothian Anorexia Nervosa Intensive Treatment Team (ANITT)

Who for?

The Anorexia Nervosa Intensive Treatment Team (ANITT) is a multidisciplinary team designed to treat those with severe anorexia nervosa, who have:

1. A BMI of <13 or
2. A BMI of <15 with additional defined risk factors e.g. weight loss > 1kg/week

What?

The ANITT has capacity for 30–35 patients, providing a combination of outpatient clinic, home visit and community setting care. A physical, dietetic and psychological prolonged assessment and stabilisation process is carried out over two to 12 weeks. Patients are then offered formulation-driven multi-disciplinary treatment. This is based on defined models of risk management and Schema Therapy. The usual psychological therapy course is around 12–18 months, but may be longer if there is evidence of continued use of therapy for change. Meal and social support are also provided, the intensity of which varies from two to 10 contacts a week. Treatment packages are reviewed six monthly. When patients are unable to use intensive treatment for change, a more minimal but supportive package of care is delivered, focussed on quality of life and managing risk.

Results

Symptom Outcomes ('quantitative study' (92))

The ANITT admissions from May 2009 to December 2015 were invited to participate in an evaluation study, collecting six-monthly outcome measures. Twenty-six patients participated, which represented 71% of the patients treated for more than 18 months during the study period. The mean duration of treatment evaluated was 40 months.

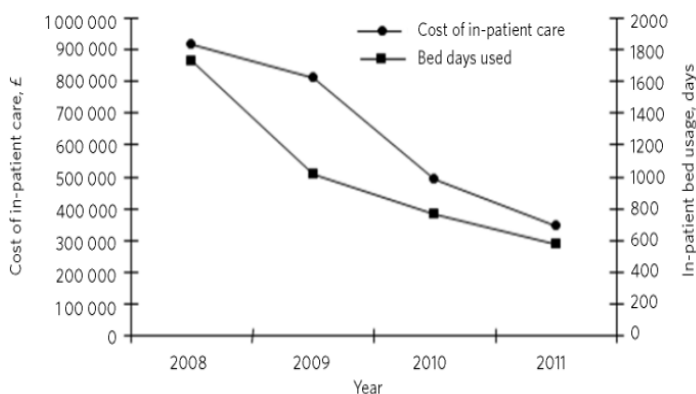


Figure 1. Inpatient usage and cost of inpatient care for patients with severe anorexia nervosa, following the expansion of NHS Lothian's ANITT (83).

At entry to service, mean BMI was 13.0, mean duration of illness 9.2 years, and mean age 26.8 years. Mean BMI increased by 3.9, to BMI 16.9 at the end of the study period. Eight patients (31%) increased their BMI to the 15–17.5 range, six (23%) to the 17.5–19 range, and six (23%) into the range of BMI >19. Three patients (11%) lost weight. During the study period, nine patients (32%) required inpatient treatment, for a mean admission duration of 59 days. Of these, six patients (21%) had multiple admissions.

Seven patients (27%) showed statistically significant change in eating disorder psychological symptoms, with five patients (19%) achieving 'remission' or 'recovery'. Thirteen patients (50%) showed no statistically significant change, nine of these (34%) showing non-significant improvement. Six patients (23%) showed significant deterioration.

Patient safety ('risk study' (88))

The 9-year crude mortality rate, for the service as a whole 2009–2017, was 6.1% ('general service evaluation'). This is low relative to mortality data for patient populations with similarly severe low weight anorexia nervosa as described by Tanaka et al. (93) and Rosling et al. (94). These studies of inpatient followed by standard outpatient care report crude mortality rates of 11.5% over 8 year follow-up (93) and 15% over 14 year follow-up (94).

Systems for monitoring and managing medical risk in low weight patients were used in the service. These systems demonstrated a high level of safety, with few significant medical complications emerging in a study among patients with an initial BMI <13.

Patient Satisfaction ('preliminary study' (83)) & ('qualitative study' (64))

A survey of 33 current or recently-discharged patients in 2010, exploring patient satisfaction on a scale of 1 to 5 (1 equating to *not satisfied at all*, and 5 *extremely satisfied*) reported a mean satisfaction rating of 4.

Service costs ('preliminary study' (83))

In 2008 prior to expanding the service to treat all patients with severe anorexia nervosa locally needing that level of care, the ANITT cost £370,000 and inpatient admissions cost £918,208, a total annual cost of care for people with severe anorexia nervosa of £1,288,208. By 2011, after service expansion to meet demand, the total annual cost was £896,552, with inpatient costs of £347,552 and the ANITT costing £549,000. Therefore, there was a total saving of £391,656 in 2011, compared to 2008, a clear example of 'spend to save' (Figure 1).

This was directly attributable to a reduction in the number and duration of admissions.

Managed increased demand ('general service evaluation')

From 2013–2016, there was a 39% increase in referral rate to the community eating disorders teams. Inpatient bed use was 1737 days in 2012 and 1774 in 2016. Therefore, despite a large increase in referrals, inpatient bed use remained relatively stable. This suggests that the ANITT continued to reduce the proportion of patients needing inpatient admissions and/or the duration of those admissions.

Conclusions

The evaluation of the ANITT has shown this model of treatment is acceptable to patients, reduces

treatment costs, is comparably safe for this high-risk population, achieves substantial weight gain in over ¾ of patients and results in symptom improvements for the majority.

This case-study reflects service outcomes gathered from five different research and evaluation projects spanning 2009–2017. These are described here as 'preliminary study' (83); 'risk study' (88); 'qualitative study' (64); 'quantitative study' (92); and 'general service evaluation'.

For more information about the current service, please contact Louise Randell:

louise.randell@nhslothian.scot.nhs.uk

For more information about the evaluation research, please contact Calum Munro:

calummunro@mentalhealthcarecollective.org.uk

South London and Maudsley (SLAM) Intensive Treatment Programme (ITP)

Who for?

SLAM's Intensive Treatment Programme (ITP) is for adolescents aged 11–18 years, with predominately restrictive eating disorders. Patients are referred to the programme from the specialist outpatient Child and Adolescent Eating Disorders Service (CAEDS) if they are rapidly losing weight for longer than four weeks or remaining below 80% median BMI for more than four weeks. The ITP is offered to around 20% of patients with a restrictive eating disorder who have not initially responded to evidence-based outpatient treatment. The ITP is also used to facilitate a faster discharge from inpatient psychiatric or paediatric care, through providing a step-down to outpatient care.

What?

The ITP is a day program which runs five days a week, 9.00–15.30, as well as two longer days where an evening meal is included (families attend one of these). The maximum group capacity each day is between eight to 10 young people. The intensity and duration of attendance to the ITP is dependent upon clinical need, with most patients beginning by attending full-time and aiming to reintegrate back to school and outpatient treatment as soon as possible. If the young person does not restore weight or loses weight for three consecutive weeks, they are referred for an inpatient admission.

The ITP aims to utilise family resources and address factors associated with the maintenance of restrictive eating disorders, such as anxiety and perfectionism. The multidisciplinary team is comprised of psychiatrists, a paediatrician, psychologists, nurses, family therapists, art therapist, and a dietitian.

Results

The case-series evaluation included a sample of 105 young people. These young people were admitted to the ITP over the first four and a half years of the programme running. Young people were excluded from the data analysis if they did not engage with the programme, or had a diagnosis of bulimia nervosa or EDNOS-BN. Twelve young people were admitted to the programme more than once: data from their first admission only was included in the data analysis.

Demographics

- 95% of participants were female.
- 89% of participants were White British.
- 89.5% met DSM-IV (95) diagnostic criteria for anorexia nervosa on admission, the remaining patients met the criteria for EDNOS-R.
- The mean duration of illness was 26.9 months.

Length of ITP attendance

- The mean length of treatment was 28.41 days over 11.7 weeks.
- Eighty-six young people (82%) completed ITP. The mean length of treatment for those who completed the ITP was 30.12 days (SD = 14) over 12.8 weeks (SD = 7.51, range 3–33).
- Nineteen young people (18%) were transferred to inpatient care so did not complete the ITP. The mean length of treatment for these young people was 20.7 days (SD = 7.8) over 6.6 weeks (SD = 3.6).

Eating Disorder Symptomatology

- In those who completed the ITP, there was a significant increase in weight over the course of the programme.

- In those who completed the ITP, there were significant changes in patient's EDE-Q scores and Eating Disorders Quality of Life Scale (EDQLS) scores.

Comorbidity

- Between the assessment before commencing the ITP and discharge following the ITP, there was a significant increase in self-ratings of mood from scores within the clinical range to scores on the border of clinical range.
- Significant decrease in Difficulty with Emotion Regulation Scale score across the ITP, indicating an increased ability in emotion regulation.
- Significant improvements in self-esteem and ability to change in young people throughout the programme.
- No changes in intolerance of uncertainty, negative problem orientation or importance of change prior to and after attending the ITP.

Discharge from the Intensive Treatment Programme

- Seventy-four young people (70%) continued outpatient treatment in Child and Adolescent Eating Disorders Service following discharge from the ITP.
- Nineteen young people (18%) were admitted to inpatient treatment.
- Twelve young people (11%) did not continue treatment within the service. Of these:
- Eight young people (8%) were referred to other child and adolescent mental health services to address co-morbidities.

- Two young people (2%) transitioned to adult eating disorder services.
- One young person (1%) was discharged to primary care.
- One young person (1%) relocated out of the UK.

Cost-Efficiency (Costs for 2017/18 (82))

Inpatient Treatment admission per day = £569.

Average length of stay for young people that were admitted to the specialist adolescent eating disorder units was 196 days in 2017/2018. The average cost was £111,524 per patient.

Intensive Treatment Programme admission per day = £651. Average stay in ITP in 2017/2018 was 38 days over 14 weeks (attendance is tapered down to support and enable young people's smooth transition to their mainstream school). The cost on average was £24,738 per patient.

Therefore, it is possible that around £87,000 can be saved for every young person for whom ITP is a suitable option.

This case-study reflects service outcomes gathered from a research and evaluation project spanning 2010-2015 (45).

For more information about the service, please contact Mima Simic: Mima.Simic@slam.nhs.uk

