**Supplement 1**

**Study Design & Methodology**

This document aims to extend the information presented in the main manuscript regarding the original study design and methodology for the DAISIES trial. Further details can be found in our protocol paper (Irish et al., 2022).

**Main aim:** To assess the relative merits of a stepped care intensive day patient treatment (DPT) approach in comparison to inpatient treatment as usual (IP-TAU) in adults with anorexia nervosa (AN).

**Trial design:** A pragmatic 2-arm multi-centre open-label parallel group non-inferiority RCT,

rated ‘very pragmatic’ on the PRECIS-2 tool (Loudon et al., 2015). To assess recruitment rates, an internal pilot trial (aiming to recruit 62 patients over 4 months) was included in the study design.

**Settings:** 12 specialist eating disorder (ED) services in the UK each with both IP and DPT units. Sites with DPT units only were included if they were a part of provider collaboratives that offered patients out-of-trust inpatient care routes. The service provisions across these sites were broadly similar, with some variation in the psychological interventions offered.

**Non-inferiority hypothesis:** In adult patients with severe AN in need of intensive specialist treatment, a stepped care DPT approach will be non-inferior to IP-TAU in relation to improving body mass index (BMI; primary outcome) at 12 months (primary endpoint) and at 24 months post-randomisation.

**Trial arms:**

Participants randomly allocated to IP-TAU arm were admitted into an IP ward at a specialist ED service. Those allocated to the stepped care DPT arm either started their specialist DPT immediately, or if deemed at high-risk, were admitted into IP care until they were medically stabilised.

**Trial Flowchart:**



**Decision criteria for the appropriate treatment (at baseline or step-down/step-up assessments):** At the screening stage, after patients’ eligibility for study participation had been confirmed by their clinician, all patients also underwent an initial risk assessment which facilitated decision making on whether the patient ought to start off in IP-TAU or DPT. Thereafter further regular risk assessments were conducted on a weekly basis in the stepped care arm only, from start to end of intensive treatment to determine which setting (IP-TAU or DPT) was most appropriate for the patient at that point, whether a patient could safely be stepped down into DPT after initial hospitalisation, and also once a patient was in DPT, if necessary, facilitated step-up into IP unit, in case of deterioration or relapse.

**Risk assessment tool:** A modified version of the Maudsley Medical Risk Assessment tool based on a traffic light system of quantifying risk (Treasure, 2009) was used to assess the risk indicators combined into a one page easy-to-use proforma. Medical risk was assessed using objective indicators of nutritional status (e.g. BMI, weight change), cardiovascular function (e.g. blood pressure, postural drop), laboratory parameters and other physical risk indicators. A psychiatric/psychosocial risk category (including e.g. suicidality, major self-harm, safe-guarding concerns etc.) was also integrated. Patients with any indicators in the **‘*red’*** risk category were usually admitted to or continued IP treatment. Patients whose risk indicators fell exclusively or predominantly into the ***‘green’*** category (with isolated or borderline amber indicators only) started or were stepped down into DPT. Patients with several indicators in the ***‘amber’*** category were usually admitted to/continued in IP treatmentuntil clear signs of improvement (i.e. the patient had ‘moved’ from the ‘red’ to the ‘green’ end of amber). If a patient remained on ***‘amber’*** for more than four weeks during their IP admission, their scores were discussed with a risk reference committee formed for the study, to aid decision making. The [masked for review] trial research team provided training for using this tool to the clinical teams.

**Data analysis:** Full details of the planned analyses can be found in the protocol paper. To judge non-inferiority of the stepped care DPT approach in terms of the primary outcome (BMI at 12 months) a two-sided 95% confidence interval (CI) of the trial arm difference in this clinical measure will be generated and this interval compared with the non-inferiority threshold (0.75 kg/m² decrease on BMI; Herpertz-Dahlmann et al., 2014). The threshold defines a region for the trial arm difference in BMI in which the stepped care would be considered non-inferior to the gold standard IP-TAU. To confirm the non-inferiority hypothesis the whole 95% CI would need to lie within this region.

**References**

Herpertz-Dahlmann, B., Schwarte, R., Krei, M., Egberts, K., Warnke, A., Wewetzer, C., ... & Dempfle, A. (2014). Day-patient treatment after short inpatient care versus continued inpatient treatment in adolescents with anorexia nervosa (ANDI): a multicentre, randomised, open-label, non-inferiority trial. *The Lancet, 383*(9924), 1222-1229.

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Loudon, K., Treweek, S., Sullivan, F., Donnan, P., Thorpe, K. E., & Zwarenstein, M. (2015). The PRECIS-2 tool: designing trials that are fit for purpose. *BMJ*, 350.

Treasure, J. (2009) A guide to the medical risk assessment for eating disorders. Available from: https://www.kcl.ac.uk/academic-psychiatry/assets/guide-for-medical-risk assessment-december-2012.pdf

**Supplement 2**

**Process Evaluation Patient Interview Topic Guide**

Introduction points to cover:

* Brief intro about the purpose of the interview - i.e. to get an understanding of what their experience of intensive treatment for an eating disorder was like.
* Please feel free to be as open as you like about your experience – we are interested in hearing about the positives and the negatives of your experiences.
* This interview is confidential and nothing you tell me about today will be shared with your treatment team. The only exception would be if you disclose anything to suggest there is a risk of harm to yourself or others, in which case I would have to contact your treatment team. If I had to do this, I would let you know and discuss this with you first.
* I’ve taken a look at one of the questionnaires you completed, the one saying about the different treatment settings you have experienced, just to give me an overall idea of your treatment journey. I’ll check my understanding of that with you at the start of the interview.
* I’ll be recording the session so that I don’t have to take as many notes and can listen to you properly. After the interview, I’ll type up the recording and then delete the recording.
* Does that sound ok? Do you have any questions before we start?

\*\*Start recording\*\*

**Interview schedule**

1. The purpose of this interview is to learn about the eating disorder treatment experiences you’ve had over the last six months. So to start with, I just want to check about the treatment settings that you’ve been in. As I understand from the questionnaire you filled in (ADSUS), you have had *x* weeks of inpatient treatment, followed by a brief interval and then *y* weeks of day patient treatment – is that right or have I missed anything?” followed by “Thank you, that’s just so I know to make sure to ask you relevant questions.”

*Prompts:*

* + Has there been anything else, like outpatient eating disorder treatment?
	+ What about any treatment for your eating disorder that required you to stay in a general hospital ward, rather than a specialist eating disorder ward?
1. Where would you like to start? We’ll cover all the different settings so which would you like to talk about first? [Participant specifies] What was it like for you? [general opening question before moving to prompts if necessary.]

*Prompts*:

* Can you remember how you felt about starting treatment in that setting?
* What were the treatments you were offered there like?
	+ Is there anything that stood out as being particularly helpful?
	+ Anything particularly unhelpful?
	+ How much did you feel that your opinions and views on your treatment were taken into account by clinicians? Were there particular times that stands out in your mind in a good or not so good way?
* How did you find the people there?
	+ *Staff? (was there anyone who stood out in a positive or negative way; helpful/less helpful things they did/said; people you did/didn’t connect with; did they seem interested in you; were they accepting of you; did you feel they respected you as a person; did you feel you got individual attention; did you feel safe with them; did you ever feel coerced by staff or otherwise negatively treated*
	+ *Patients? (was there anyone who stood out in a positive or negative way; helpful/less helpful things they did/said; people you did/didn’t connect with; thinking about the patient group as a whole what was the culture like (e.g. welcoming, inclusive, supportive, competitive; cliquey, bitchy)*
* How did you find the general environment?
* How was the process of starting treatment in the \*\*setting\*\* patient programme?
* You were there for *x* weeks, after the initial period of beginning and settling in, how did you find it?
* In what ways do you think this treatment setting might have helped you?
* At the end of your stay in inpatient/programme in day patient, how did you find the process of treatment there coming to an end?
* Did you transfer to another treatment setting? How did you find that process?
1. Now let’s talk about your \*\*other setting\*\* treatment. What was it like for you? [general opening question before moving to prompts if necessary.]

*Prompts*:

* Can you remember how you felt about starting treatment in that setting?
* What were the treatments you were offered there like?
	+ Is there anything that stood out as being particularly helpful?
	+ Anything particularly unhelpful?
	+ How much did you feel that your opinions and views on your treatment were taken into account by clinicians? Were there particular times that stands out in your mind in a good or not so good way?
* How did you find the people there?
	+ *Staff? (was there anyone who stood out in a positive or negative way; helpful/less helpful things they did/said; people you did/didn’t connect with; did they seem interested in you; were they accepting of you; did you feel they respected you as a person; did you feel you got individual attention; did you feel safe with them; did you ever feel coerced by staff or otherwise negatively treated*
	+ *Patients? (was there anyone who stood out in a positive or negative way; helpful/less helpful things they did/said; people you did/didn’t connect with; thinking about the patient group as a whole what was the culture like (e.g. welcoming, inclusive, supportive, competitive; cliquey, bitchy)*
* How did you find the general environment?
* How was the process of starting treatment in the \*\*setting\*\* patient programme?
* You were there for *x* weeks, after the initial period of beginning and settling in, how did you find it?
* In what ways do you think this treatment setting might have helped you?
* At the end of your stay in inpatient/programme in day patient, how did you find the process of treatment there coming to an end?
* Did you transfer to another treatment setting? How did you find that process?
1. Let’s take a step back now and think about your treatment experience as a whole.
* What would you consider to be the best bits about your treatment?
* What about the worst parts?
* Is there anything that you think should have been done differently, or that you would have liked to be different?
* How do you feel about the level of involvement that your partner/family/caregiver had in your treatment?
	+ *Too much? Too little? Not the right type of involvement?*
* Do you feel there are any particular pros and cons to either treatment setting, in your experience?
* *\*\*only for people that have moved multiple times*\*\* You mentioned that you moved back and forth between treatment settings a bit. How do you feel that it affected you moving back and forth between treatment settings?
* Is there anything you’d like to say to future patients undergoing this treatment?
1. We’re almost done now, I just have one final question. Which is, are there any stand out memories for you, either good or bad?

**Process Evaluation Carer Interview Topic Guide**

Introduction points to cover:

* Brief intro about the purpose of the interview - i.e. to get an understanding of what your experience of caring for or supporting someone going through intensive treatment for an eating disorder was like.
* Check whether using ‘carer’ language is ok with them – if not adjust to their preferred style (parent/partner/mum/dad/caregiver etc.).
* Please feel free to be as open as you like about your experience – we are interested in hearing about the positives and the negatives of your experiences.
* This interview is confidential and nothing you tell me about today will be shared with anyone else. The only exception would be if you disclose anything to suggest there is a risk of harm to yourself or others, in which case I may have to break confidentiality. If I had to do this, I would let you know and discuss this with you first.
* I’ve taken a look at one of the questionnaires \*\*patient name\*\* completed, the one saying about the different treatment settings they have experienced, just to give me an overall idea of the treatment process. I’ll check my understanding of that with you at the start of the interview.
* I’ll be recording the session so that I don’t have to take as many notes and can listen to you properly. After the interview, I’ll type up the recording and then delete the recording.
* Does that sound ok? Do you have any questions before we start?

\*\*Start recording\*\*

**Interview schedule**

1. The purpose of this interview is to learn about your views on intensive eating disorder treatment, and your experiences of caring for someone with an eating disorder over the past six months who has been receiving this type of treatment. So to start with, I just want to check about the treatment settings that \*\*patient name\*\* has been in. As I understand from the questionnaire they filled in (ADSUS), they have had *x* weeks of inpatient treatment, followed by a brief interval and then *y* weeks of day patient treatment – is that right or have I missed anything?” followed by “Thank you, that’s just so I know to make sure to ask you relevant questions.”

*Prompts:*

* + Has there been anything else, like outpatient eating disorder treatment?
	+ What about any eating disorder treatment that required them to stay in a general hospital ward, rather than a specialist eating disorder ward?
1. Where would you like to start? We’ll cover all the different settings so which would you like to talk about first? [Participant specifies] What was it like for you? [general opening question before moving to prompts if necessary.]

*Prompts*:

* Can you remember how you felt about \*patient name\* starting treatment in that setting? How do you think \*patient name\* felt about it?
* What were the treatments \*patient name\* was offered there like?
	+ Is there anything that stood out as being particularly helpful from your perspective? Anything particularly unhelpful?
	+ How do you think \*patient name\* found them?
	+ How involved did you feel in \*patient name’s\* treatment?
		- *Did you feel you knew why certain treatments were offered?*
		- *Did you feel involved in decision making about treatments?*
		- *Were you invited to attend progress reviews? Was that helpful?*
		- *How did you feel about that level of involvement?*
	+ Were any interventions offered that included you, such as family therapy or family group? *If yes* - how did you find these?
		- *Did you feel it helped you? What about \*patient name\*?*
* How did you find the people there? How did \*patient name\* find them?
	+ *Staff? (was there anyone who stood out in a positive or negative way; helpful/less helpful things they did/said; people you did/didn’t connect with; did they seem interested in you; were they accepting of you; did you feel they respected you as a person; did you feel you got individual attention*)
	+ *Patients? (was there anyone that you observed who stood out in a positive or negative way)*
* How did you find the general environment there? From your perspective, how do you think \*patient name\* found the general environment there?
* How was the process of \*patient name\* starting treatment in the \*\*setting\*\* patient programme for you? How was it for \*patient name\*?
* \*patient name\* was there for *x* weeks, after the initial period of beginning and settling in, how did you find it? How do you think they found it?
* In what ways do you think this treatment setting might have helped \*patient name\*?
* Do you think that there are any particular pros and cons to \*treatment setting\*, in your experience?
* At the end of \*patient name’s\* stay in inpatient/programme in day patient, how did you find the process of treatment there coming to an end? How did \*patient name\* feel about it?
* Did \*patient name\* transfer to another treatment setting? How did you find that process? How did they find it?
1. Now let’s talk about the \*\*other setting\*\* treatment. What was it like for you? [general opening question before moving to prompts if necessary.]

*Prompts*:

* Can you remember how you felt about \*patient name\* starting treatment in that setting? How do you think \*patient name\* felt about it?
* What were the treatments \*patient name\* was offered there like?
	+ Is there anything that stood out as being particularly helpful from your perspective? Anything particularly unhelpful?
	+ How do you think \*patient name\* found them?
	+ How involved did you feel in \*patient name’s\* treatment?
		- *Did you feel you knew why certain treatments were offered?*
		- *Did you feel involved in decision making about treatments?*
		- *Were you invited to attend progress reviews? Was that helpful?*
		- *How did you feel about that level of involvement?*
	+ Were any interventions offered that included you, such as family therapy or family group? *If yes* - how did you find these?
		- *Did you feel it helped you? What about \*patient name\*?*
* How did you find the people there? How did \*patient name\* find them?
	+ *Staff? (was there anyone who stood out in a positive or negative way; helpful/less helpful things they did/said; people you did/didn’t connect with; did they seem interested in you; were they accepting of you; did you feel they respected you as a person; did you feel you got individual attention*)
	+ *Patients? (was there anyone that you observed who stood out in a positive or negative way)*
* How did you find the general environment there? From your perspective, how do you think \*patient name\* found the general environment there?
* How was the process of \*patient name\* starting treatment in the \*\*setting\*\* patient programme for you? How was it for \*patient name\*?
* \*patient name\* was there for *x* weeks, after the initial period of beginning and settling in, how did you find it? How do you think they found it?
* In what ways do you think this treatment setting might have helped \*patient name\*?
* Do you think that there are any particular pros and cons to \*treatment setting\*, in your experience?
* At the end of \*patient name’s\* stay in inpatient/programme in day patient, how did you find the process of treatment there coming to an end? How did \*patient name\* feel about it?
* Did \*patient name\* transfer to another treatment setting? How did you find that process? How did they find it?
1. Let’s take a step back now and think about the overall process of \*patient name’s\* treatment.
* What would you consider to be the best bits about \*patient name’s\* treatment?
* What about the worst parts?
	+ *For you, and for them*
* Is there anything that you think could have been done differently?
* *\*\*only for people that have moved multiple times*\*\* You mentioned that you moved back and forth between treatment settings a bit.
	+ How do you feel that these changes affected \*patient name\*?
	+ What about how it affected you personally?
* Is there anything you’d like to say to future carers whose loved ones are undergoing this treatment?
* Is there anything I’ve not asked about that you would like to tell me about your experience of \*patient name’s\* treatment?
1. We’re almost done now, I just have one final question. Which is, are there any stand out memories for you, either good or bad?

**Supplement 3**

Table 1

Demographic information of participating carers at baseline

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | **IP-TAU (*n* = 4)** |  | **Stepped Care DPT (*n* = 2)** |  | **Total (*N*=6)** |
| **Demographics** |  |  |  |  |  |
| *Age at consent* |  |  |  |  |  |
| Mean (SD) | 47.0 (22.1) |  | 53.0 (2.8) |  | 49.4 (16.0)  |
| Median (IQR) | 55.0 (22.0-64.0) |  |  53.0 (51.0-55.0) |  | 55.0 (51.0-55.0)  |
| Missing n (%) | 1 (25.0) |  | 0 (0.0) |  | 1 (16.7) |
|  |  |  |  |  |  |
| *Gender, n (%)* |  |  |  |  |  |
| Female | 3 (75.0) |  | 2 (100) |  | 5 (83.3) |
| Prefer not to say | 1 (25.0) |  | 0 |  | 1 (16.7) |
|  |  |  |  |  |  |
| *Ethnicity*  |  |  |  |  |  |
| White | 4 (100) |  | 2 (100) |  | 6 (100.0) |
|  |  |  |  |  |  |
| *Employment status*  |  |  |  |  |  |
| Paid full-time employment (35 or more hours per week) | 2 (50) |  | 0 (0.0) |  | 2 (33.3) |
| Paid part-time employment (up to 34 hours per week) | 1 (25.0) |  | 1 (50.0) |  | 2 (33.3) |
| Self-employed | 1 (25.0) |  | 0 (0.0) |  | 1 (16.7) |
| Home maker | 0 (0.0) |  | 1 (50.0) |  | 1 (16.7) |
|  |  |  |  |  |  |
| *Nature of relationship to the study participant* |  |  |  |  |  |
| Child | 1 (25) |  | 0 |  | 1 (16.7) |
| Sibling | 1 (25) |  | 0 |  | 1 (16.7) |
| Parent | 2 (50) |  | 2 (100) |  | 4 (66.7) |
|  |  |  |  |  |  |
| *Living with the study participant* |  |  |  |  |  |
| Yes | 3 (75.0) |  | 2 (100) |  | 5 (83.3) |
| No | 1 (25.0) |   | 0 (0.0) |   | 1 (16.7) |

**Table 2**

Carer burden assessment scores at baseline, 6- and 12-months

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **IP-TAU (*n*=4)** |  | **Stepped Care DPT (*n*=2)** |  | **Total (*N*=6)** |
|  |  | **Baseline**  | **6 months**  | **12 months**  |  | **Baseline**  | **6 months**  | **12 months**  |  | **Baseline**  | **6 months**  | **12 months**  |
| **CDASS anxiety** | Mean (SD) | 4.0 (2.8)  | 5.0 (1.2)  | 3.5 (3.4)  |  | 6.0 (2.8)  | 7.0 (4.2)  | 2.0 (.)  |  | 4.7 (2.7)  | 5.7 (2.3)  | 3.2 (3.0)  |
|  | Median (IQR) | 3.0 (2.0-6.0)  | 5.0 (4.0-6.0)  | 3.0 (1.0-6.0)  |  | 6.0 (4.0-8.0)  | 7.0 (4.0-10.0)  | 2.0 (2.0-2.0)  |  | 4.0 (2.0-8.0)  | 5.0 (4.0-6.0)  | 2.0 (2.0-4.0)  |
|  | Missing n (%) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 0 (0.0) | 0 (0.0) | 1 (50.0) |  | 0 (0.0) | 0 (0.0) | 1 (16.7) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CDASS depression** | Mean (SD) | 5.8 (4.2)  | 10.5 (5.0)  | 4.5 (3.4)  |  | 19.0 (12.7)  | 9.0 (7.1)  | 4.0 (.)  |  | 10.2 (9.5)  | 10.0 (5.1)  | 4.4 (3.0)  |
|  | Median (IQR) | 6.5 (3.0-8.5)  | 11.0 (7.0-14.0)  | 5.0 (2.0-7.0)  |  | 19.0 (10.0-28.0)  | 9.0 (4.0-14.0)  | 4.0 (4.0-4.0)  |  | 8.5 (6.0-10.0)  | 11.0 (4.0-14.0)  | 4.0 (4.0-6.0)  |
|  | Missing n (%) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 0 (0.0) | 0 (0.0) | 1 (50.0) |  | 0 (0.0) | 0 (0.0) | 1 (16.7) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CDASS stress** | Mean (SD) | 10.5 (7.7)  | 16.0 (4.3)  | 10.5 (3.8)  |  | 18.0 (11.3)  | 13.0 (1.4)  | 12.0 (.)  |  | 13.0 (8.7)  | 15.0 (3.7)  | 10.8 (3.3)  |
|  | Median (IQR) | 12.0 (5.0-16.0)  | 15.0 (13.0-19.0)  | 9.0 (8.0-13.0)  |  | 18.0 (10.0-26.0)  | 13.0 (12.0-14.0)  | 12.0 (12.0-12.0)  |  | 12.0 (10.0-18.0)  | 14.0 (12.0-16.0)  | 10.0 (8.0-12.0)  |
|  | Missing n (%) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 0 (0.0) | 0 (0.0) | 1 (50.0) |  | 0 (0.0) | 0 (0.0) | 1 (16.7) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **EDSIS** | Mean (SD) | 42.0 (15.3)  | 43.0 (5.2)  | 27.3 (16.1)  |  | 56.0 (1.4)  | 42.5 (19.1)  | 33.0 (.) |  | 46.7 (13.9)  | 42.8 (10.2)  | 28.4 (14.2)  |
|  | Median (IQR) | 43.0 (30.5-53.5)  | 40.0 (40.0-49.0)  | 22.5 (15.0-39.5)  |  | 56.0 (55.0-57.0)  | 42.5 (29.0-56.0)  | 33.0 (33.0-33.0)  |  | 51.5 (38.0-57.0)  | 40.0 (40.0-49.0)  | 30.0 (15.0-33.0)  |
|  | Missing n (%) | 0 (0.0) | 1 (25.0) | 0 (0.0) |   | 0 (0.0) | 0 (0.0) | 1 (50.0) |   | 0 (0.0) | 1 (16.7) | 1 (16.7) |

*Note*. CDASS – Career Depression Anxiety Stress Scale; EDSIS - Eating Disorder Symptom Impact Scale

**Supplement 4**

**Figure 1**

*Mean monthly EDE-QS and 95% confidence intervals per treatment arm*



**Table 1**

Summaries of outcome measures by treatment arm and time points

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | **IP-TAU (*n*=7)** |  | **Stepped Care DPT (*n*=8)** |  | **Total (*N*=15)** |
| **Outcome Measure** |   | **Baseline**  | **6 months**  | **12 months**  |  | **Baseline**  | **6 months**  | **12 months**  |  | **Baseline** | **6 months**  | **12 months**  |
| EDEI | Mean (SD) | 2.8 (1.5) | 1.6 (1.2) | 0.2 (.)  |  | 3.6 (0.8) | 3.2 (1.6) | 4.0 (0.8)  |  | 3.2 (1.2) | 2.6 (1.6) | 3.4 (1.7)  |
|  | Median (IQR) | 2.2 (1.3-4.5) | 1.6 (0.6-2.6) | 0.2 (0.2-0.2)  |  | 3.8 (3.1-4.2) | 3.6 (1.6-4.5) | 3.9 (3.8-4.5)  |  | 3.7 (2.1-4.3) | 2.6 (1.0-3.7) | 3.8 (3.0-4.5)  |
|  | Missing, n(%) | 0 (0.0)  | 3 (42.9)  | 6 (85.7)  |  | 0 (0.0)  | 2 (25.0)  | 3 (37.5)  |  | 0 (0.0)  | 5 (33.3)  | 9 (60.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| DASS anxiety | Mean (SD) | 12.3 (5.5) | 8.7 (6.3) | 4.0 (2.8) |  | 18.3 (8.5) | 14.3 (7.7) | 14.0 (7.9) |  | 15.5 (7.7) | 11.5 (7.3) | 9.6 (7.9) |
|  | Median (IQR) | 10.0 (8.0-16.0) | 8.0 (4.0-10.0) | 5.0 (2.0-6.0) |  | 19.0 (11.0-25.0) | 15.0 (14.0-20.0) | 12.0 (10.0-22.0) |  | 14.0 (10.0-22.0) | 12.0 (6.0-18.0) | 6.0 (4.0-12.0) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  | 0 (0.0)  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| DASS depression | Mean (SD) | 23.4 (13.4) | 18.0 (13.3) | 9.0 (10.5) |  | 29.0 (10.5) | 22.3 (13.0) | 18.0 (9.4) |  | 26.4 (11.8) | 20.2 (12.7) | 14.0 (10.4) |
|  | Median (IQR) | 28.0 (12.0-34.0) | 15.0 (14.0-24.0) | 8.0 (0.0-18.0) |  | 31.0 (24.0-37.0) | 25.0 (14.0-30.0) | 20.0 (14.0-24.0) |  | 28.0 (22.0-36.0) | 18.0 (14.0-30.0) | 16.0 (4.0-20.0) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  | 0 (0.0)  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| DASS stress | Mean (SD) | 21.7 (14.2) | 16.7 (10.4) | 13.5 (7.9) |  | 30.5 (7.2) | 27.0 (7.9) | 26.0 (6.6) |  | 26.4 (11.5) | 21.8 (10.3) | 20.4 (9.4) |
|  | Median (IQR) | 26.0 (8.0-34.0) | 15.0 (10.0-18.0) | 15.0 (7.0-20.0) |  | 31.0 (27.0-34.0) | 26.0 (20.0-34.0) | 24.0 (24.0-28.0) |  | 30.0 (18.0-34.0) | 19.0 (15.0-31.0) | 20.0 (18.0-24.0) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  | 0 (0.0)  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| OCI-R | Mean (SD) | 18.3 (22.1) | 13.2 (15.7) | 8.3 (3.4) |  | 24.0 (14.5) | 22.3 (20.4) | 15.8 (16.8) |  | 21.3 (18.0) | 17.8 (18.0) | 12.4 (12.7) |
|  | Median (IQR) | 9.0 (3.0-35.0) | 8.5 (4.0-13.0) | 9.0 (5.5-11.0) |  | 19.5 (14.0-35.5) | 21.5 (4.0-35.0) | 7.0 (3.0-33.0) |  | 19.0 (6.0-35.0) | 17.8 (18.0) | 7.0 (4.0-11.0) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  | 0 (0.0)  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| CIA | Mean (SD) | 33.8 (8.0) | 26.3 (16.6) | 15.3 (11.1) |  | 40.5 (10.4) | 33.5 (12.7) | 30.4 (6.5) |  | 37.4 (9.7) | 29.9 (14.6) | 23.7 (11.5) |
|  | Median (IQR) | 31.0 (27.0-41.0) | 26.5 (12.0-42.0) | 11.5 (7.5-23.0) |  | 44.0 (35.0-48.0) | 38.0 (21.0-41.0) | 31.0 (25.0-34.0) |  | 41.0 (27.0-47.0) | 32.0 (18.0-41.5) | 25.0 (15.0-31.0) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  | 0 (0.0)  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| MSPSS | Mean (SD) | 5.9 (1.1) | 5.9 (0.6) | 5.8 (1.0) |  | 5.6 (1.2) | 5.0 (1.1) | 5.9 (0.8) |  | 5.7 (1.1) | 5.5 (0.9) | 5.9 (0.9) |
|  | Median (IQR) | 6.1 (5.3-6.8) | 6.1 (5.4-6.3) | 5.8 (5.0-6.6) |  | 5.9 (4.6-6.4) | 4.6 (4.5-5.9) | 5.8 (5.4-6.4) |  | 5.9 (5.1-6.8) | 5.7 (4.6-6.3) | 5.8 (5.3-6.4) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  | 0 (0.0)  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| WSAS | Mean (SD) | 24.3 (8.0) | 17.5 (13.0) | 12.3 (14.0) |  | 28.1 (6.0) | 22.8 (9.4) | 19.2 (10.6) |  | 26.3 (7.0) | 20.2 (11.2) | 16.1 (12.0) |
|  | Median (IQR) | 24.0 (20.0-28.0) | 15.5 (10.0-29.0) | 6.5 (4.0-20.5) |  | 27.0 (24.0-33.0) | 24.5 (20.0-29.0) | 15.0 (15.0-28.0) |  | 25.0 (23.0-30.0) | 22.0 (10.5-29.0) | 15.0 (6.0-28.0) |
|  | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |  |  | 2 (25.0)  | (37.5)  |  | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| UCLA | Mean (SD) | 53.7 (11.1) | 50.7 (11.6) | 47.8 (12.1) |  | 48.3 (15.7) | 49.8 (11.3) | 46.0 (10.9) |  | 50.8 (13.6) | 50.3 (10.9) | 46.8 (10.7) |
|  | Median (IQR) | 56.0 (51.0-60.0) | 53.5 (51.0-57.0) | 52.5 (40.0-55.5) |  | 48.5 (35.0-61.5) | 52.0 (43.0-60.0) | 45.0 (37.0-55.0) |  | 53.0 (42.0-60.0) | 53.0 (43.0-60.0) | 50.0 (37.0-55.0) |
|   | Missing, n(%) | 0 (0.0)  | 1 (14.3)  | 3 (42.9)  |   |   | 2 (25.0)  | (37.5)  |   | 0 (0.0)  | 3 (20.0)  | 6 (40.0)  |

*Note.* EDEI, Eating Disorder Examination Interview; DASS, Depression, Anxiety and Stress Scales; OCI-R, Obsessive Compulsive Inventory-Revised; CIA, Clinical Impairment Assessment; MSPSS, Multidimensional Scale of Perceived Social Support; WSAS, Work and Social Adjustment Scale; UCLA, UCLA Loneliness Scale.

**Table 2**

Summaries of acceptability and motivation measures by treatment arms at baseline

|  |  |  |
| --- | --- | --- |
|  |  | **Baseline (pre randomisation)** |
|   |   | **IP-TAU (n=7)** | **Stepped Care DPT (n=8)** | **Total (N=15)** |
| How acceptable a stepped care day patient approach is (points)  | Mean (SD) | 8.2 (1.4)  | 8.4 (1.7)  | 8.3 (1.5)  |
| Median (IQR) | 8.5 (6.9-9.4)  | 8.5 (6.3-10.0)  | 8.5 (6.9-10.0)  |
| Missing, n(%) | 0 (0.0)  | 1 (12.5)  | 1 (6.7)  |
| How acceptable an inpatient treatment as usual approach is (points)  | Mean (SD) | 5.6 (4.2)  | 4.6 (2.5)  | 5.1 (3.3)  |
| Median (IQR) | 4.2 (1.4-9.8)  | 4.2 (2.6-5.9)  | 4.2 (2.6-8.8)  |
| Missing, n(%) | 0 (0.0)  | 1 (12.5)  | 1 (6.7)  |
| How important the participant feels it is to change their eating disordered behaviours (points)  | Mean (SD) | 9.3 (1.6)  | 8.0 (1.1)  | 8.6 (1.5)  |
| Median (IQR) | 10.0 (9.6-10.0)  | 7.6 (7.3-8.6)  | 9.1 (7.4-10.0)  |
| Missing, n(%) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  |
| To what extent the participant feels able to change their eating disordered behaviours (points)  | Mean (SD) | 7.0 (3.0)  | 6.8 (2.4)  | 6.9 (2.6)  |
| Median (IQR) | 8.0 (6.8-8.6)  | 6.7 (5.8-8.6)  | 7.2 (5.8-8.6)  |
| Missing, n(%) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  |
| How important the participant feels it is to increase/adjust their daily food intake, in order to achieve/maintain a healthy weight (points) | Mean (SD) | 7.9 (3.6)  | 7.7 (1.7)  | 7.8 (2.7)  |
| Median (IQR) | 9.3 (7.9-10.0)  | 7.4 (6.0-9.6)  | 8.1 (6.1-10.0)  |
| Missing, n(%) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  |
| To what extent the participant feels able to increase/adjust their daily food intake, in order to achieve/maintain a healthy weight (points) | Mean (SD) | 7.1 (2.9)  | 6.4 (2.2)  | 6.7 (2.5)  |
| Median (IQR) | 8.0 (6.0-9.0)  | 6.0 (4.5-8.0)  | 7.0 (5.0-9.0)  |
| Missing, n(%) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  |

**Table 3**

Summaries of acceptability and motivation measures by treatment arms at 6- and 12-month after randomisation

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **6 months (post randomisation)**  | **12 months (post randomisation)** |
|  |  | **IP-TAU (n=7)** | **Stepped Care DP (n=8)** | **Total (N=15)** | **IP-TAU (n=7)** | **Stepped Care DP (n=8)** | **Total (N=15)** |
| How acceptable was the allocated treatment (points)  | Mean (SD) | 4.7 (3.3)  | 6.6 (3.0)  | 5.7 (3.1)  | 7.9 (2.3)  | 8.1 (2.9)  | 8.0 (2.5)  |
| Median (IQR) | 5.5 (1.7-6.9)  | 7.3 (3.2-9.3)  | 6.4 (3.0-8.0)  | 8.4 (6.2-9.6)  | 10.0 (7.0-10.0)  | 9.2 (7.0-10.0)  |
| Missing, n(%) | 1 (14.3)  | 2 (25.0)  | 3 (20.0)  | 3 (42.9)  | 3 (37.5)  | 6 (40.0)  |
| How important the participant feels it is to change their eating disordered behaviours or maintain the positive changes (points)  | Mean (SD) | 8.3 (2.2)  | 7.7 (3.3)  | 8.0 (2.7)  | 10.0 (0.0)  | 6.8 (4.4)  | 8.2 (3.5)  |
| Median (IQR) | 9.2 (6.7-10.0)  | 9.3 (5.1-10.0)  | 9.3 (5.9-10.0)  | 10.0 (10.0-10.0)  | 10.0 (2.4-10.0)  | 10.0 (10.0-10.0)  |
| Missing, n(%) | 1 (14.3)  | 2 (25.0)  | 3 (20.0)  | 3 (42.9)  | 3 (37.5)  | 6 (40.0)  |
| To what extent the participant feels able to change their eating disordered behaviours or maintain the positive changes (points)  | Mean (SD) | 5.2 (3.5)  | 6.0 (1.9)  | 5.6 (2.7)  | 6.9 (1.9)  | 5.7 (1.6)  | 6.2 (1.7)  |
| Median (IQR) | 6.3 (1.8-7.5)  | 6.3 (5.5-7.3)  | 6.3 (4.1-7.4)  | 6.7 (5.8-8.1)  | 5.7 (4.7-6.7)  | 6.6 (4.9-6.8)  |
| Missing, n(%) | 1 (14.3)  | 2 (25.0)  | 3 (20.0)  | 3 (42.9)  | 3 (37.5)  | 6 (40.0)  |
| How important the participant feels it is to increase/adjust their daily food intake, in order to achieve/maintain a healthy weight (points) | Mean (SD) | 7.2 (3.0)  | 6.6 (4.3)  | 6.9 (3.5)  | 9.6 (0.8)  | 6.7 (4.6)  | 8.0 (3.7)  |
| Median (IQR) | 8.5 (5.8-8.9)  | 8.5 (2.6-10.0)  | 8.5 (4.2-10.0)  | 10.0 (9.3-10.0)  | 10.0 (2.6-10.0)  | 10.0 (8.5-10.0)  |
| Missing, n(%) | 1 (14.3)  | 2 (25.0)  | 3 (20.0)  | 3 (42.9)  | 3 (37.5)  | 6 (40.0)  |
| To what extent the participant feels able to increase/adjust their daily food intake, in order to achieve/maintain a healthy weight (points) | Mean (SD) | 5.2 (2.5)  | 6.5 (1.5)  | 5.8 (2.1)  | 6.0 (2.2)  | 5.4 (3.4)  | 5.7 (2.7)  |
| Median (IQR) | 5.1 (3.0-8.0)  | 6.5 (6.0-8.0)  | 6.0 (4.5-8.0)  | 6.5 (4.5-7.5)  | 4.0 (3.0-9.0)  | 6.0 (3.0-8.0)  |
| Missing, n(%) | 1 (14.3)  | 2 (25.0)  | 3 (20.0)  | 3 (42.9)  | 3 (37.5)  | 6 (40.0)  |

**Table 4**

Treatment settings of participants who took part in the process evaluation interviews

|  |  |
| --- | --- |
| **Participant ID** | **Setting(s) Discussed\*** |
| P1 | IP, DPT |
| P2 | DPT |
| P3 | DPT |
| P4 | IP, DPT |
| P5 | IP, DPT |
| P6 | IP, DPT |
| C1 | DPT |
| C2 | IP, DPT |
| C3 | IP |

*Note*. P, patient; C, carer; IP, inpatient; DPT, daypatient treatment.

\* Although P2 and P3 were admitted to the IP unit at the time of randomisation, the length of their IP stay was too short to provide in-depth information regarding their experiences. Thus, only data regarding their experiences with DPT stays were included in the analysis.

**Table 5**

*Indicative quotes for themes identified in the qualitative analysis*

|  |  |
| --- | --- |
| **Theme 1: Valued aspects of care** | **Indicative quotes** |
| ***Degrees of collaboration between staff and patient*** | *‘They are constantly asking for our opinions, we've got a suggestion box. Very, very listened to. They are constantly wanting to reflect on if things need to be changed, are we happy?’* (P4 - DPT)*‘There was no collaboration or discussion really, they just make the decisions and then feed them back to you.’* (P5 - IP)*‘My views weren't listened to because my weight wasn't at the minimum threshold and I don't really feel like that's okay’* (P2 - DP)T*‘I feel like we were, kind of, cut out the loop, and I don't think that was helpful for* [patient]*’* (C1 - DPT) |
| ***The importance of supportive others*** | *‘I know I have friends for life who like I said, go through similar things as me and I'm able to, kind of, relate to them.’* (P1 – IP/DPT)*‘Helpful because they're* [the patients] *all fairly motivated and wanting to get better so you're all in this together and can support each other.’* (P5 - DP)*‘she felt she couldn't really go to some of the staff for any emotional issues. If she was having a bit of a mental rough time, she'd try and hide it, at some point’* (C3 - IP)*‘with some staff it was really easy. They were like, you know, sensitive and then there was other staff who were very blunt, like I said before, so, it would be, kind of, hard to reach out to all the staff members’* (P1 - IP) |
| ***Perceived overfocus on eating and weight disliked*** | *‘a lot of the mentality is kind of just like to eat to get out but you're not eating to get better.’* (P5 - IP)*‘you were just a patient. I don't really feel like I was treated, always, like a person. I was only looked at through the context of the disorder,’* (P2 - DPT)*‘I knew that I needed more one-to-one psychology and I knew what I needed to work through but then, that, equally, wasn't necessarily offered’* (P6 - DPT)*‘I think another good bit is the closeness that it brought when [Patient] could, sort of, finally open up about it after she'd had a few sessions from a therapist and I think got it sorted in her head.’* (C3 - IP) |
| **Theme 2: Challenging experiences across treatment settings**  |  |
| ***More positive appraisals of the day patient treatment experience*** | *‘It's* [DP] *difficult, but, it's definitely a significantly better options than being in inpatients.’* (P3 - DPT)*‘I was excited to make those changes, and I was excited to see more independence in my recovery because when you're in hospital as an inpatient, it's very, very different, obviously.’* (P2 – DPT)*‘the benefits, in terms of weight gain or rest, I think it's just so negated by the actual experience, that it's really difficult to put that as a pro’* (P6 - IP)*‘So very chaotic, lots of alarms going off, lots of screaming and shouting and not much actual support or care as to, like, how other people are affected by it’* (P5 - IP) |
| ***Negative impact of external factors on treatment***  | *‘So, while she was waiting for tests to come in, she had to, sort of, stay in her room. Like, I think that was quite stressful, then, because suddenly it felt like a lot of her freedom is being taken away, she was suddenly restricted, she couldn't have visitors again.’* (C3 - IP)*‘It was a bit odd at the start because we were online, and then you moved to in person… I think it was just naturally going to be, like, tough going in to that environment and stuff’* (P3 - DPT)*‘all that happened was to eat, and then it was just waiting until the next time that you're about to eat. And I understand that is, like, a big part of it, but I think it just meant that that time in between was very difficult, and there was not much to do or help you through it.’* (P3 - DPT)*‘there aren't enough staff and so they're always pressed for time and always stressed and don't have the resources to kind of stop and help you individually’* (P5 - IP) |
| **Theme 3: Experiences of transitions** |  |
| ***Day patient helping transition after inpatient*** | *‘if I went straight from inpatient to home, I would have found really difficult to settle in. But day patient, kind of, helped me to ease in’* (P1 - DPT)*‘I felt like it would be better overall for her to be at home feeling, kind of, that nurturing environment combined with the, sort of, daycare safety net’* (C1 - DPT)*‘inpatient to day patient and day patient to outpatient is a lot smoother than just inpatient to outpatient’* (P5 - IP) |
| ***Desire for better communication around transition*** | *‘It* [Discharge] *felt very disconnected and kind of confusing and not very well, like, well organised.’* (P5 - DPT)*‘we had a target, I knew the target, they knew the target, and working towards the target, the date moved quite a few times because I wasn't there and ready to be discharged.’* (P4 - IP) |

**Supplement 5**

**Health Economic Data**

**Methods**

***Data***

Data on the use of hospital services, community health and social care services and medications were collected using a modified version of the *Adult Service Use Schedule* (AD-SUS). The DAISIES study AD-SUS was based on versions used in previous studies in adult mental health populations (Richards et al, 2016) and adapted using existing evidence of service use in eating disorders populations (Schmidt et al, 2017; Gowers et al, 2010). To avoid unblinding research assessors, the AD-SUS was separated into two versions for the collection of: (1) hospital services (including those provided as part of the interventions), which were self-reported by participants; and (2) community-based services and medications, which were reported in interview with the research assessor.

Information about the study participant’s use of services was collected at baseline (T0), six-month (T1) and twelve-month (T2) follow-up. At baseline (T0), service use over the previous six months was collected. At follow-up, service use covered the period since last interview, which was typically 6 months (periods T0 to T1 and T1 to T2). However, for participants who missed the T1 follow-up, service use at T2 covered the full period from baseline to twelve-month follow-up. Where this was the case (n=1 participant), data were still classed as missing at T1 and all service use reported was classed as falling in the T1 to T2 follow-up period.

Health utility data were collected from participants using the revised EQ-5D descriptive system, the EQ-5D-5L, which is a generic (non-disease-specific) measure for describing and valuing health-related quality of life. (Kind, 1996) The EQ-5D-5L includes a rating of own health in five domains (mobility, self-care, usual activities, pain/discomfort, anxiety/depression) using five response levels. Health state descriptions based on participant responses were given a utility score using responses from a representative sample of adults in the UK (Dolan et al, 1995). The EQ-5D has been increasingly used to examine in health-related quality of life in young adults with eating disorders (Hart et al, 2020).

***Analysis***

Resource use by study participants is reported as the mean (standard deviation) and median by group and as a percentage of the group who had at least one contact (% using). No statistical analyses of economic outcomes were carried out due to small sample sizes. EQ-5D-5L health states were mapped using an approved statistical algorithm onto the equivalent EQ-5D-3L tariffs, as there are currently no NICE-approved tariffs for the EQ-5D-5L in the UK. (National Institute of Health and Care Excellence, 2022)

**Results**

At baseline, all service use data (hospital and community) were available for eight participants in the stepped-care group and seven participants in the inpatient treatment as usual (IP-TAU) group. At follow-up, all service use data were available in the stepped-care day patient treatment (DPT) group for six participants at T1 (75%) and five participants at T2 (63%). In the IP-TAU group, hospital data were available for six participants at T1 (87%) and four participants at T2 (57%), whilst community services data were only available for four participants at T1 (57%) and one participant at T2 (14%).

Hospital service use by group is reported in Tables E1-E3 (T0, T1 and T2, respectively). The majority of hospital contacts, whether inpatient, day-patient or outpatient, for both groups and at all time points, were with specialist eating disorder services. Other hospital contacts, whether for eating disorders, mental health or other reasons, were low in comparison. During the six-months prior to study entry, hospital contacts with specialist eating disorders services by the stepped-care DPT group were higher for inpatient and outpatient contacts, but lower for day-patient contacts, compared with the IP-TAU group. The reverse was seen at T1, for the period from baseline to six-month follow-up, with the stepped care DPT group having more day-patient contacts and fewer inpatient and outpatient contacts with specialist ED services. At T2, for the period from six- to twelve-month follow-up, the stepped care DPT group had more outpatient and less inpatient and day-patient contacts with specialist ED services than the IP-TAU group. Accident & Emergency and ambulance contacts were low in both groups and at all time points.

Community service and medication use by group is reported in Tables E4-E6 (T0, T1 and T2, respectively). Contacts were highest at all time points for GPs and mental health-related services (CMHTs, psychiatrists and psychological therapists). The most commonly prescribed psychotropic medication was antidepressants (reported by around 30-50% of respondents) and prescription of other non-psychotropic medication was common (reported by around 50-80% of respondents). No use was reported in either group of social workers, art, drama or music therapy, or drug and alcohol support worker, so these services are not reported in the tables.

Health utility scores by group and follow-up are reported in Table E7. At baseline, median scores were similar in both groups (0.69 stepped care DPT; 0.64 IP-TAU) and showed improvement between T0 and T1 (0.72 stepped care DPT; 0.73 IP-TAU) and between T1 and T2 for the IP-TAU group (0.73) but not the stepped care DPT group (0.52). Scores are low in comparison to population norms (typically around 0.9 for all ages; 0.95 for populations under the age of 40).

**Discussion**

Interpretation of the health economic data is greatly limited by the small sample size and attrition rates. The data confirmed high levels of hospital contacts with specialist eating disorders services, alongside relatively low rates of other hospital contacts. GP and community mental health services were the most accessed community-based services, and prescription of antidepressant medication was also common. Health-related quality of life was relatively low in both groups and at all time points compared with the general population.

**Table 1: Hospital service use in the six months before baseline (T0)**

|  |  |  |
| --- | --- | --- |
|  | **Stepped Care DPT (n=8)** | **IP-TAU (n=7)** |
|  | **Mean (SD)** | **Median** | **% using** | **Mean (SD)** | **Median** | **% using** |
| Inpatient – specialist eating disorders ward (nights) | 35.8 (27.8) | 26 | 88 | 22.4 (13.8) | 29 | 100 |
| Inpatient – any other ward for treatment related to eating disorders (nights) | 0.6 (1.4) | 0 | 25 | 0.0 (0.0) | 0 | 0 |
| Inpatient – general psychiatric/mental health ward (nights) | 3.5 (9.9) | 0 | 13 | 0.0 (0.0) | 0 | 0 |
| Inpatient – any other ward for treatment not related to eating disorders (nights) | 1.6 (3.5) | 0 | 25 | 0.0 (0.0) | 0 | 0 |
| Day patient – specialist eating disorders service (days) | 3.8 (10.6) | 0 | 13 | 11.4 (30.2) | 0 | 14 |
| Day patient – any other ward for treatment related to eating disorders (days) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Day patient – general psychiatric/mental health service (days) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Day patient – any other service for treatment not related to eating disorders (days) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Outpatient – specialist eating disorders service (attendances) | 18.1 (28.6) | 2 | 63 | 9.1 (10.0) | 8 | 71 |
| Outpatient – any other service for treatment related to eating disorders (attendances) | 2.0 (4.3) | 0 | 25 | 0.0 (0.0) | 0 | 0 |
| Outpatient – general psychiatric/mental health service (attendances) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Outpatient – any other service for treatment not related to eating disorders (attendances) | 2.4 (3.7) | 0 | 50 | 0.7 (1.3) | 0 | 29 |
| Accident & emergency – for reasons related to an eating disorder (attendances) | 1.0 (1.3) | 0 | 50 | 0.1 (0.4) | 0 | 14 |
| Accident & emergency – for any other reason (attendances) | 0.8 (1.4) | 0 | 38 | 0.4 (0.8) | 0 | 29 |
| Ambulance – care and/or transport (attendances) | 0.1 (0.4) | 0 | 38 | 0.3 (0.8) | 0 | 29 |
| Hospital transport/taxis paid for by the service to attend day patient services (number) | 2.5 (7.1) | 0 | 13 | 0.7 (1.9) | 0 | 14 |
| Hospital transport/taxis paid for by the service to attend outpatient services (number) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |

**Table 2: Hospital service use between baseline (T0) and six-month follow-up (T1)**

|  |  |  |
| --- | --- | --- |
|  | **Stepped Care DPT (n=6)** | **IP-TAU (n=6)** |
|  | **Mean (SD)** | **Median** | **% using** | **Mean (SD)** | **Median** | **% using** |
| Inpatient – specialist eating disorders ward (nights) | 25.8 (35.2) | 0 | 50 | 57.7 (39.3) | 46 | 83 |
| Inpatient – any other ward for treatment related to eating disorders (nights) | 0.7 (3.6) | 0 | 33 | 0.3 (0.8) | 0 | 17 |
| Inpatient – general psychiatric/mental health ward (nights) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Inpatient – any other ward for treatment not related to eating disorders (nights) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Day patient – specialist eating disorders service (days) | 42.7 (28.5) | 30 | 83 | 30.7 (35.2) | 1 | 68 |
| Day patient – any other ward for treatment related to eating disorders (days) | 0.0 (0.0) | 0 | 0 | 0.3 (0.8) | 0 | 17 |
| Day patient – general psychiatric/mental health service (days) | 0.0 (0.0) | 0 | 0 | 0.2 (0.4) | 0 | 17 |
| Day patient – any other service for treatment not related to eating disorders (days) | 0.0 (0.0) | 0 | 0 | 0.5 (0.8) | 0 | 33 |
| Outpatient – specialist eating disorders service (attendances) | 3.5 (5.7) | 2 | 68 | 5.7 (6.2) | 2 | 68 |
| Outpatient – any other service for treatment related to eating disorders (attendances) | 0.8 (1.6) | 0 | 25 | 0.5 (1.2) | 0 | 17 |
| Outpatient – general psychiatric/mental health service (attendances) | 0.2 (0.4) | 0 | 17 | 0.2 (0.4) | 0 | 17 |
| Outpatient – any other service for treatment not related to eating disorders (attendances) | 0.0 (0.0) | 0 | 0 | 0.5 (0.8) | 0 | 33 |
| Accident & emergency – for reasons related to an eating disorder (attendances) | 0.8 (2.0) | 0 | 17 | 0.5 (0.8) | 0 | 33 |
| Accident & emergency – for any other reason (attendances) | 0.0 (0.0) | 0 | 0 | 0.2 (0.4) | 0 | 17 |
| Ambulance – care and/or transport (attendances) | 0.0 (0.0) | 0 | 0 | 0.3 (0.8) | 0 | 17 |
| Hospital transport/taxis paid for by the service to attend day patient services (number) | 4.3 (10.6) | 0 | 17 | 0.5 (0.8) | 0 | 33 |
| Hospital transport/taxis paid for by the service to attend outpatient services (number) | 0.0 (0.0) | 0 | 0 | 0.7 (1.6) | 0 | 17 |

**Table 3: Hospital service use between six-month (T1) and twelve-month follow-up (T2)**

|  |  |  |
| --- | --- | --- |
|  | **Stepped Care DPT (n=5)** | **IP-TAU (n=4)** |
|  | **Mean (SD)** | **Median** | **% using** | **Mean (SD)** | **Median** | **% using** |
| Inpatient – specialist eating disorders ward (nights) | 6.8 (9.6) | 0 | 40 | 41.8 (56.7) | 0 | 50 |
| Inpatient – any other ward for treatment related to eating disorders (nights) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Inpatient – general psychiatric/mental health ward (nights) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Inpatient – any other ward for treatment not related to eating disorders (nights) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Day patient – specialist eating disorders service (days) | 30.6 (35.3) | 30 | 60 | 69.3 (52.0) | 60 | 75 |
| Day patient – any other ward for treatment related to eating disorders (days) | 6.0 (12.3) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Day patient – general psychiatric/mental health service (days) | 18.0 (26.3) | 2 | 60 | 0.0 (0.0) | 0 | 0 |
| Day patient – any other service for treatment not related to eating disorders (days) | 0.6 (1.3) | 0 | 20 | 0.0 (0.0) | 0 | 0 |
| Outpatient – specialist eating disorders service (attendances) | 22.6 (18.0) | 28 | 100 | 15.8 (10.1) | 15 | 100 |
| Outpatient – any other service for treatment related to eating disorders (attendances) | 2.2 (3.2) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Outpatient – general psychiatric/mental health service (attendances) | 6.6 (12.2) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Outpatient – any other service for treatment not related to eating disorders (attendances) | 2.2 (3.2) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Accident & emergency – for reasons related to an eating disorder (attendances) | 1.8 (2.5) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Accident & emergency – for any other reason (attendances) | 0.6 (1.3) | 0 | 20 | 0.0 (0.0) | 0 | 0 |
| Ambulance – care and/or transport (attendances) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Hospital transport/taxis paid for by the service to attend day patient services (number) | 22.0 (33.6) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Hospital transport/taxis paid for by the service to attend outpatient services (number) | 7.0 (15.1) | 0 | 40 | 0.0 (0.0) | 0 | 0 |

**Table 4: Community-based service and medication use in the six months before baseline (T0)**

|  |  |  |
| --- | --- | --- |
|  | **Stepped Care DPT (n=8)** | **IP-TAU (n=7)** |
|  | Mean (SD) | Median | % using | Mean (SD) | Median | % using |
| GP (contacts) |  6.1 (7.2) | 2 | 75 | 3.4 (2.1) | 4 | 100 |
| Practice nurse (contacts) | 0.6 (0.9) | 0 | 38 | 0.7 (1.5) | 0 | 29 |
| Other community nurse (contacts) | 0.6 (1.8) | 0 | 13 | 0.1 (0.9) | 0 | 14 |
| Community mental health team worker (contacts) | 1.5 (3.0) | 0 | 25 | 0.0 (0.0) | 0 | 0 |
| Community psychiatrist (contacts) | 2.9 (6.6) | 0 | 38 | 0.0 (0.0) | 0 | 0 |
| Psychological therapist (contacts) | 0.0 (0.0) | 0 | 0 | 11.7 (18.6) | 0 | 43 |
| Physiotherapist or occupational therapist (contacts) | 0.1 (0.4) | 0 | 13 | 1.4 (3.8) | 0 | 14 |
| Dentist (contacts) | 1.5 (3.5) | 0 | 25 | 0.1 (0.4) | 0 | 14 |
| Dietitian or nutritionist (contacts) | 0.4 (0.7) | 0 | 25 | 0.4 (1.1) | 0 | 14 |
| Antidepressant medication (percentage using) | - | - | 38 | - | - | 43 |
| Antipsychotic medication (percentage using) | - | - | 0 | - | - | 29 |
| Anxiolytics/sedatives/sleep medication (percentage using) | - | - | 13 | - | - | 0 |
| Other psychotropic medication (percentage using) | - | - | 0 | - | - | 0 |
| Other non-psychotropic medication (percentage using) | - | - | 88 | - | - | 57 |

**Table 5: Community-based service and medication use between baseline (T0) and six-month follow-up (T1)**

|  |  |  |
| --- | --- | --- |
|  | **Stepped Care DPT (n=6)** | **IP-TAU (n=4)** |
|  | Mean (SD) | Median | % using | Mean (SD) | Median | % using |
| GP (contacts) | 1.5 (1.5) | 1 | 67 | 2.5 (2.5) | 2 | 75 |
| Practice nurse (contacts) | 0.5 (0.8) | 0 | 33 | 0.0 (0.0) | 0 | 0 |
| Other community nurse (contacts) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Community mental health team worker (contacts) | 4.8 (10.4) | 0 | 33 | 0.0 (0.0) | 0 | 0 |
| Community psychiatrist (contacts) | 0.0 (0.0) | 0 | 0 | 1.0 (2.0) | 0 | 25 |
| Psychological therapist (contacts) | 4.3 (10.6) | 0 | 17 | 6.8 (13.5) | 0 | 25 |
| Physiotherapist or occupational therapist (contacts) | 0.3 (0.8) | 0 | 17 | 0.0 (0.0) | 0 | 0 |
| Dentist (contacts) | 1.0 (1.6) | 0 | 50 | 1.3 (1.0) | 1 | 75 |
| Dietitian or nutritionist (contacts) | 0.5 (1.2) | 0 | 17 | 0.0 (0.0) | 0 | 0 |
| Antidepressant medication (percentage using) |  |  | 33 |  |  | 50 |
| Antipsychotic medication (percentage using) |  |  | 0 |  |  | 25 |
| Anxiolytics/sedatives/sleep medication (percentage using) |  |  | 17 |  |  | 0 |
| Other psychotropic medication (percentage using) |  |  | 17 |  |  | 0 |
| Other non-psychotropic medication (percentage using) |  |  | 83 |  |  | 50 |

**Table 6: Community-based service and medication use between six-month (T1) and twelve-month follow-up (T2)**

|  |  |  |
| --- | --- | --- |
|  | **Stepped Care DPT (n=5)** | **IP-TAU (n=1)** |
|  | Mean (SD) | Median | % using | Mean (SD) | Median | % using |
| GP (contacts) | 4.0 (5.6) | 1 | 60 | 0.0 (0.0) | 0 | 0 |
| Practice nurse (contacts) | 1.2 (1.8) | 0 | 60 | 0.0 (0.0) | 0 | 0 |
| Other community nurse (contacts) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Community mental health team worker (contacts) | 2.0 (4.5) | 0 | 20 | 0.0 (0.0) | 0 | 0 |
| Community psychiatrist (contacts) | 1.0 (2.2) | 0 | 20 | 0.0 (0.0) | 0 | 0 |
| Psychological therapist (contacts) | 0.8 (1.8) | 0 | 20 | 0.0 (0.0) | 0 | 0 |
| Physiotherapist or occupational therapist (contacts) | 0.0 (0.0) | 0 | 0 | 0.0 (0.0) | 0 | 0 |
| Dentist (contacts) | 1.0 (1.7) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Dietitian or nutritionist (contacts) | 0.4 (0.6) | 0 | 40 | 0.0 (0.0) | 0 | 0 |
| Antidepressant medication (percentage using) | - | - | 40 | - | - | 0 |
| Antipsychotic medication (percentage using) | - | - | 0 | - | - | 0 |
| Anxiolytics/sedatives/sleep medication (percentage using) | - | - | 20 | - | - | 0 |
| Other psychotropic medication (percentage using) | - | - | 20 | - | - | 0 |
| Other non-psychotropic medication (percentage using) | - | - | 80 | - | - | 0 |

**Table 7: EQ-5D Utility Scores**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Follow-up** |  | **Stepped Care DPT** |  |  | **IP-TAU** |  |
|  | **n** | ***Mean (SD)*** | **Median** | **n** | **Mean (SD)** | **Median** |
| T0  | 8 | 0.6283750 (0.1597945) | 0.693 | 7 | 0.4947143 (0. 3966244) | 0.635 |
| T1 | 6 | 0.6950000 (0. 1844993) | 0.721 | 6 | 0.6775000 (0. 2147976) | 0.725 |
| T2 | 5 | 0.5422000 (0. 2122833) | 0.520 | 4 | 0.6850000 (0.076516) | 0.733 |

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**Supplement 6**

**Recruitment challenges**

The DAISIES trial was originally designed prior to COVID-19, so adjustments were made to the initial protocol. The study set-up phase started in December 2019, however the recruitment was delayed to November 2020 and the internal pilot was postponed to September 2021 due to the first wave of COVID-19 in the UK and related infection control measures. DPT services remained closed or operated at reduced capacity across the majority of sites throughout the recruitment period. Of the 12 sites that had initially agreed to take part, only 6 opened to recruitment, and of those two had only opened for recruitment from October 2021 onwards.

Throughout the study, multiple strategies to aid successful recruitment were employed: remaining in close contact with recruiting sites, establishing a network of DAISIES trial recruitment champions within site clinical teams, attending clinical meetings to aid in the identification of potential participants, holding several Learning Events, producing study merchandise with the DAISIES trial logo (e.g., t-shirts, notebooks) and circulating monthly newsletters.

**Patient and Public Involvement**

In the PPI focus groups conducted when the study was originally designed (involving 12 patients with severe AN who had an experience of IP, DPT or both), patients supported the study design and expressed that they would be open to both treatment options when they were in their most unwell state. They particularly valued the stepped-care component, which was perceived to offer personalised care. Due to recruitment difficulties, we conducted further PPI focus groups in January 2022 to understand patients’ perspectives on the reasons contributing to recruitment difficulties and the potential impacts of the pandemic (e.g. visiting restrictions, online DPT provision) on treatment experiences. Three focus groups were held with 17 patients, all of whom would have met eligibility criteria. The majority of patients felt that the [masked for review] trial addressed an important and necessary issue for adult AN treatment, yet a strong dislike of the randomisation component and the uncertainty of treatment allocation were expressed that deterred participation. They also shared that they would be more interested in participating if no randomisation was involved. Patients further expressed their perception of IP as restricting choice and freedoms, particularly in the context of the pandemic. Overall, comparing the pre-trial and later focus groups reveals a marked shift in opinion, primarily due to the pandemic related factors.