

RESEARCH ARTICLE

Differences in treatment trajectory following brief paediatric inpatient admissions for children and young people with eating disorders

Shama El-Salahi¹  | Ciorsdan Anderson² | Alannah McDaid³ | Amy Lunn¹ | Emily Ralph¹ | Joanna Holliday¹

¹Oxford Health NHS Foundation Trust, Oxford, UK

²Oxford Institute of Clinical Psychology Training and Research, Oxford, UK

³University of Exeter, Exeter, UK

Correspondence

Ciorsdan Anderson, Oxford Institute of Clinical Psychology Training and Research, Isis Education Centre, Warneford Hospital, Warneford Lane, Oxford OX3 7JX, UK.

Email: ciorsdan.anderson@hmc.ox.ac.uk

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Abstract

Objective: Little is known about factors associated with treatment trajectory following brief paediatric admissions for children and young people (CYP) admitted for medical complications of their eating disorder (ED). This project aimed to identify possible factors and ways to improve the usefulness of paediatric admissions.

Method: Retrospective NHS data was analysed to explore differences between paediatric admissions followed by community-based care or inpatient psychiatric care. Twelve parents were interviewed to seek feedback about paediatric admissions.

Results: Patients who received subsequent inpatient psychiatric care were unwell for longer, had longer paediatric admissions and more crisis team input, were more likely to have had previous admissions, and had higher parent-reported anxiety and depression. However, the groups did not significantly differ in ED severity. The interviews identified recommendations for improving paediatric admissions, which included improving understanding of EDs, enhancing communication channels, and providing psychological support to parents.

Conclusions: Factors linked with illness severity (but not illness severity itself) appear to be associated with the difference between CYP either returning to community-based care or requiring more intensive psychiatric input. These factors may help clinicians understand who requires subsequent inpatient care, allowing clinicians to target more intensive support earlier and facilitate smoother transitions between services.

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KEYWORDS

adolescent, anorexia nervosa, bulimia nervosa, child, hospitals, paediatric

Highlights

- Children and adolescents appeared less likely to require intensive inpatient psychiatric care within 3 months following discharge from a paediatric ward if they had shorter stays in paediatric hospitals, shorter known duration of their eating disorder, less crisis team input, fewer previous paediatric and psychiatric admissions, and lower parent-rated anxiety and depression.
- Paediatric admissions are a valuable component of the treatment pathway, and they could be improved further by improving understanding of eating disorders among staff, enhancing communication between services and with families, and providing psychological support to parents.
- For some families, paediatric admissions seemed to instigate recovery by helping them to both access necessary treatment and realise the severity of their child's health.

1 | INTRODUCTION AND AIMS

Eating disorders (EDs) in children and young people (CYP) are serious conditions that can have harmful and long-lasting medical consequences (Campbell & Peebles, 2014). Although treatment provided by community-based Child and Adolescent Eating Disorder Services (CAEDS) is linked to better outcomes and cost-effectiveness, a minority of patients still require high intensity care delivered in inpatient settings (Gowers et al., 2010; Herpertz-Dahlmann et al., 2014; Madden et al., 2017; NHS England, 2015; NICE, 2017). Two types of inpatient care are typically used in the UK: brief paediatric admissions (a few days or weeks) are generally used to stabilise acute medical complications of an ED under the care of paediatric-trained medical and nursing staff; whilst longer-term psychiatric admissions (usually several months) tend to be used when there is a significant risk to self and the young person is deemed to need longer-term intensive psychiatric care (NHS England, 2015). Given the high cost, poorer outcomes and additional risks of inpatient psychiatric care, there is considerable interest in alternative treatment pathways (BEAT, 2015; Gowers et al., 2007). Although brief paediatric admissions are not an alternative to psychiatric admissions, it is possible that for some they may both stabilise the patient and avoid a longer psychiatric admission (Wootton et al., 2014). Little is known about the impact of brief paediatric admissions on treatment trajectory and

whether for some they negate the need for longer psychiatric admissions altogether.

1.1 | Paediatric management of eating disorders

EDs now present a significant health issue for paediatric medical services. The incidence matches many more 'traditional' paediatric chronic conditions and outnumbers illnesses such as meningitis for most age groups (Hudson & Court, 2012). However, management of EDs in CYP is often provided by paediatric staff who have minimal training in the management of EDs, and admissions for EDs are often unplanned, unprepared and sometimes done unwillingly by paediatric teams leading to potential risks and adverse events (Hudson et al., 2013). There is concern about the provision of mental health services for CYP and the high proportion of inpatient beds used for EDs (House of Commons Health Committee, 2014; NHS England, 2014). This concern escalated during the Covid-19 pandemic. In response, the 2015 'Access and Waiting Time Standard (AWTS) for CYP with an eating disorder' was developed to provide commissioning guidance for community-based CAEDS and related treatment pathways including paediatric inpatient care (NHS England, 2015). The AWTS's primary aim is to improve timely access to NICE-concordant treatment. However, it makes secondary recommendations for effective joint

working with paediatric services and for workforce planning to include paediatricians to improve shared knowledge and expertise between community and paediatric services.

1.2 | Local service

The CAEDS involved in this study was established in 2016 and provides outpatient ED treatment for people under 18 years of age. In line with the AWTs, the team has employed a consultant paediatrician since May 2017 and refined its standard operating process for inpatient admissions, which involves continuous contact between community and paediatric services (see Figure 1). The team has become particularly interested in the difference between CYP who have a brief paediatric admission and either return to community-based care or require longer-term inpatient psychiatric care. If certain factors are involved in the difference in treatment trajectories, the team may have an opportunity to intervene and prevent longer stays in hospital. In the wider literature, it is evident that rapid response to treatment predicts better outcomes and early intervention may help to prevent longstanding courses of illness (Linardon et al., 2016; Vall & Wade, 2015). Predictors of hospitalisation include ED severity, social risk factors in the family, psychiatric comorbidities, and low motivation to change (see Ametller et al., 2005; Kemp et al., 2023; Steinhausen et al., 2008). However, there is a dearth of research looking into outcomes of paediatric admissions (Manning et al., 2022). To the authors' knowledge, a study by Banks

and Wood (2023) is the first to do so in their evaluation of a paediatric medical stabilisation intervention for EDs. The researchers found that a diagnosis of anorexia nervosa and lower percentage median BMI (%mBMI) on admission were both associated with increased likelihood of transfer to a specialist eating disorder unit following a brief paediatric admission. Further research of this type is needed to better understand the factors associated with different treatment pathways.

The CAEDS involved in the current study hypothesised that the impact of brief paediatric admissions on the young person or their parents may be one of the factors that affects treatment trajectory. This can be thought of as representing a move into the 'action' stage of the transtheoretical model of behaviour change (Prochaska & DiClemente, 1992), where families may be mobilised into action after recognising the life-threatening aspects of the ED. Treatment in a medical setting alongside other critically ill patients has been proposed to reinforce the severity of the young person's condition, which can have a significant impact on their readiness to change (Chapman et al., 2023). Paediatric admissions are often the first time when families must confront the seriousness of the ED and such admissions may therefore motivate engagement in further treatment (Bravender et al., 2017). As family involvement in ED care is known to have a positive impact on treatment outcomes (Le Grange et al., 2010), understanding the impact of brief paediatric admissions on families is important. Furthermore, families are in an ideal position to identify ways of improving aspects of care, so seeking their feedback is invaluable.

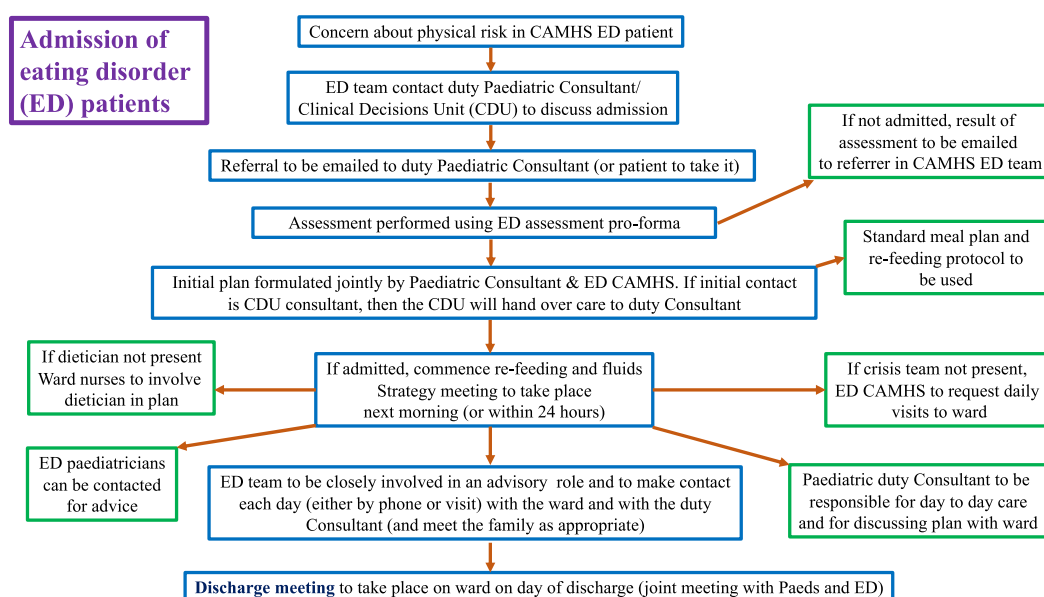


FIGURE 1 Standard operating procedure for eating disorder admissions in the local NHS Trust.

1.3 | Aims

This study aimed to identify factors that differentiate CYP who return to community-based care following a brief paediatric admission and CYP who require longer-term inpatient psychiatric care. Additionally, we aimed to understand caregiver impressions about paediatric admission and its effect on treatment course.

2 | METHOD

The study was conducted in the United Kingdom as part of a doctoral degree in Clinical Psychology. Recruitment and data collection ran from July 2020 to April 2021. The project was deemed to be service evaluation by the host institution's research governance team, therefore ethical approval from the Health Research Authority was not required. Approval was instead gained from the local NHS Trusts where CYP had been admitted to hospital. To maintain patient confidentiality, the CAEDS de-identified all data before sharing it with the first author and initiated contact with all potential participants. All data was transferred securely using NHS email systems.

The project employed a mixed-methods design. Part 1 involved analysis of retrospective NHS data to compare CYP who had a paediatric admission and (1) returned to community-based care ('community group') or (2) went on to receive inpatient psychiatric care within 3 months of discharge ('psychiatric group'). This allowed identification of factors that might be associated with group differences. CYP were included if they had a paediatric admission between May 2016–July 2020, which covers the period since the service was established to when the database was analysed.

Part 2 involved semi-structured interviews with parents of current service users who had a paediatric admission within the past 18 months. After reading an information sheet, informed consent was implied by participation in the project and verbal consent was gained at the start of each interview to audio-record for later transcription. The first author interviewed six parents of CYP from the community group and six from the psychiatric group to seek feedback about their brief paediatric admission. Twelve interviews were deemed sufficient for reaching data saturation to understand families' experiences. Whilst there are no clear guidelines around sample size in qualitative research (Braun & Clarke, 2013), a recent systematic review found that 9–17 interviews are enough for data saturation (Hennink & Kaiser, 2022).

In both parts, CYP with any ED (e.g., anorexia nervosa, bulimia nervosa) were included if they were

admitted to a paediatric ward for medical complications related to ED symptoms (e.g., critically low weight, cardiac problems); CYP who were admitted for the treatment of self-harm injuries or Avoidant/Restrictive Food Intake Disorder were excluded.

2.1 | Measures

The study variables (see Table 1) were taken from the CAEDS secure database where patient information was routinely recorded as part of clinical practice. They were collected to record activity, assess clinical outcomes, and inform service developments, and reflect physical, psychological and social factors that research has shown impacts on ED aetiology and recovery (Vall & Wade, 2015). The interview schedule (Supporting Information S1: Appendix A) was developed by the authors and centred on parents' experience of their child's paediatric admission.

2.2 | Data analysis

All continuous variables were checked for normality through exploration of histograms and Q-Q plots, skewness and kurtosis statistics, and the Shapiro-Wilk test. Group differences were analysed using a *t*-test, Mann-Whitney *U* test and chi square test. The qualitative data was analysed using thematic analysis following Braun and Clarke's (2006) method. This included careful reading of the interview transcripts, noting down initial ideas about the data, systematically coding interesting features of the data, collating codes into potential themes, and reviewing and defining themes. Parents who took part in the interviews were consulted on the accuracy of themes to improve the validity and reliability of the data. For added robustness, three authors blindly read one interview transcript and extracted relevant themes, which were compared to the themes extracted by the first author.

3 | RESULTS

3.1 | Retrospective NHS data

Quantitative data from 102 CYP ($N = 69$ community group, $N = 33$ psychiatric group) were analysed. Table 2 provides descriptive data and test statistics for all variables and Supporting Information S1: Appendix B provides normality data of the statistical tests used. The mean age of participants was 14.25 years old, and

TABLE 1 Study variables.

Variables	Scale
1. Demographics	
Age at initial assessment	Years
Sex	Male/female
Ethnicity	Asian/Mixed White & Asian/any other mixed background/White British/any other White background
2. Treatment factors	
Duration of paediatric admission	Number of days
Duration of CAMHS crisis team input before, during, and after admission	Number of days
Previous paediatric admissions	Yes/no
Previous psychiatric admissions	Yes/no
3. Illness severity factors	
Duration of known illness	Number of days between referral to CAEDS and paediatric admission
%mBMI at initial assessment	Percentage median BMI
Physical risk at initial assessment	MARSIPAN risk rating: High/medium/low (Junior MARSIPAN, 2012)
Severity of eating disorder symptoms at start of treatment	Eating disorder examination for adolescents (EDE-A; Fairburn et al., 2008); a 36-item self-report measure designed to assess the range and severity of eating disorder features and validated for use with adolescents
The impact of eating disorder symptoms on psychosocial functioning at start of treatment	Clinical impairment assessment (Bohn & Fairburn, 2008); a reliable and valid 16-item self-report measure of the severity of psychosocial impairment due to eating disorder features
4. Co-morbidity	
Severity of anxiety and depression at initial assessment (child and parent-rated versions)	Revised Child's anxiety and depression scale (RCADS; Chorpita et al., 2000); a reliable and valid 47-item child and parent self-report measure to assess for severity of anxiety and mood disorders
Presence of self-harm risk	Yes/no
Presence of suicide risk	Yes/no

Abbreviation: CAMHS, child and adolescent mental health service.

the average length of paediatric admission was 5 days. The crisis team were involved in seven young people's care for over 1 year as CYP often stay open to the team during lengthy inpatient stays for support during home leave. Six individuals had comorbid diagnoses recorded in the database, which included autism ($N = 3$), anxiety ($N = 1$), depression ($N = 2$), obsessive-compulsive disorder ($N = 1$), and suspected emerging personality disorder ($N = 1$); the numbers of comorbidities do not add up to a total of six as two individuals had more than one additional diagnosis. Statistical analyses demonstrated that compared to the community group, the psychiatric group were admitted to a paediatric

ward for longer, had more crisis team input before, during and after the admission, had been unwell for longer before the admission, were more likely to have had previous paediatric admissions and psychiatric admissions, and their parents rated their anxiety and depression higher on the Revised Child's Anxiety and Depression Scale (RCADS). The groups did not significantly differ on the following variables: age, sex, ethnicity, %mBMI, ED severity on the Eating Disorder Examination for Adolescents (EDE-A), clinical impairment of psychosocial functioning on the Clinical Impairment Assessment (CIA), and child-rated anxiety and depression on the RCADS.

TABLE 2 Descriptive and inferential test statistics for all study variables.

Variables	Community group <i>N</i> = 69				Psychiatric group <i>N</i> = 33				Inferential statistics		
	<i>N</i>	%	<i>M</i> (<i>SD</i>)	Range (min–max)	<i>N</i>	%	<i>M</i> (<i>SD</i>)	Range (min–max)	Test statistic	<i>p</i> -Value	Effect size ^a
1. Demographics											
Age on admission	69		14.09 (1.98)	7–18	33		14.58 (1.79)	11–17	$U = 993.5$	0.296	$r = 0.10$
Sex (females)	62	89.9			32	97.0			$X^2 = 1.56$	0.432	$V = 0.12$
Ethnicity	69										
White British	55	79.7			29	87.9			$X^2 = 5.49$	0.389	$V = 0.23$
White (any other background)	4	5.8			2	6.1					
Asian	1	1.4			0	0.0					
Mixed (any other background)	4	5.8			1	3.0					
Mixed White & Asian	0	0.0			1	3.0					
2. Treatment factors											
Duration of paediatric admission (days)	69		4.28 (2.93)	1–18	33		6.55 (4.35)	1–21	$U = 746.0$	0.004**	$r = 0.28$
Crisis input											
Before admission (days)	55		6.07 (15.53)	0–93	30		24.73 (46.00)	0–226	$U = 420.5$	<0.001**	$r = 0.43$
During admission (days)	56		3.55 (3.30)	0–17	28		6.14 (4.88)	0–21	$U = 566.5$	0.037*	$r = 0.23$
After admission (days)	57		72.96 (130.82)	0–880	30		278.03 (184.62)	0–815	$U = 208.0$	<0.001**	$r = 0.62$
Had previous paediatric admission	13	18.8			13	39.4			$X^2 = 6.18$	0.023*	$V = 0.36$
Had previous psychiatric admission	5	7.2			15	45.5			$X^2 = 19.52$	<0.001**	$V = 0.46$
3. Illness severity factors											
Duration of illness (days)	63		104.08 (229.42)	0–1106	31		318.58 (476.30)	0–1983	$U = 498.0$	<0.001**	$r = 0.40$
%mBMI on admission	57		81.76 (10.92)	62–109	29		77.52 (9.31)	63.8–95	$t(84) = 1.79$	0.078	$d = 0.42$
Physical risk at assessment											
High risk	29	42.0			18	54.5			$X^2 = 1.77$	0.629	$V = 0.14$
Medium risk	19	27.5			6	18.2					
Low risk	4	5.8			1	3.0					
Eating disorder severity (EDE-A)											
Restraint subscale	41		3.65 (2.10)	0–6	19		4.10 (1.97)	0–6	$U = 336.0$	0.399	$r = 0.11$
Eating concern subscale	41		2.30 (1.44)	0.2–5.4	19		3.52 (1.32)	0.4–5	$U = 306.0$	0.187	$r = 0.17$

TABLE 2 (Continued)

Variables	Community group <i>N</i> = 69			Psychiatric group <i>N</i> = 33			Inferential statistics		
	<i>N</i>	%	<i>M</i> (<i>SD</i>) Range (min–max)	<i>N</i>	%	<i>M</i> (<i>SD</i>) Range (min–max)	Test statistic	<i>p</i> -Value	Effect size ^a
Weight concern subscale	41		3.79 (1.94) 0–6	19		4.12 (1.76) 0.6–6	<i>U</i> = 346.5	0.499	<i>r</i> = 0.09
Shape concern subscale	41		4.07 (1.86) 0–6	19		4.27 (1.69) 0.25–6	<i>U</i> = 369.0	0.749	<i>r</i> = 0.04
Global score	41		3.61 (1.72) 0.15–5.6	19		4.00 (1.54) 0.36–5.75	<i>U</i> = 339.5	0.433	<i>r</i> = 0.10
Psychosocial impairment (CIA)	32		28.56 (14.81) 0–79	9		31.56 (13.05) 5–43	<i>U</i> = 107.0	0.252	<i>r</i> = 0.18
4. Comorbidity									
Anxiety and depression (RCADS)									
Child reported anxiety	30		55.17 (12.67) 37–81	10		58.30 (11.91) 44–81	<i>U</i> = 119.0	0.342	<i>r</i> = 0.15
Child reported depression	31		63.55 (11.69) 40–81	10		71.30 (14.84) 53–97	<i>t</i> (39) = −1.71	0.096	<i>d</i> = 0.584
Parent reported anxiety	30		58.17 (13.51) 37–81	12		69.17 (11.46) 52–81	<i>U</i> = 100.0	0.024*	<i>r</i> = 0.35
Parent reported depression	31		70.42 (10.73) 45–81	12		80.50 (10.76) 56–106	<i>U</i> = 84.0	0.004**	<i>r</i> = 0.44
Self-harm risk present	16	23.2		6	18.2		χ^2 = 1.62	0.263	<i>V</i> = 0.17
Suicide risk present	22	31.9		10	30.3		χ^2 = 1.45	0.259	<i>V</i> = 0.17

Note: The community group were participants who had a paediatric admission followed by at least 3 months of community-based care, whilst the psychiatric group were participants who had a paediatric admission followed by a psychiatric admission within 3 months of discharge.

^aEffect size interpretation: *r*—Small effect size = 0.1, medium effect size = 0.3, large effect size = 0.5; *V* (Cramer's *V*)—Small effect size = <0.2, medium effect size = 0.2–0.6, large effect size >0.6; *d*—Small effect size = 0.2, medium effect size = 0.5, large effect size = 0.8.

*Significant at *p* < 0.05; **Significant at *p* < 0.01.

3.2 | Interviews with parents

Twenty-seven families were identified as eligible for interview. Of these, four were not approached as clinicians considered it inappropriate due to family distress levels, and one had incorrect contact details. Twenty-two families were invited to take part in the project; 10 parents did not respond and 12 participated in the interviews (55% response rate) between November 2020 and April 2021. Of those who participated, six had a child in the community group and six in the psychiatric group. There were no obvious differences between the two groups, therefore data is presented collectively for the whole sample. All interviewees were parents, rather than other types of caregivers. Four key themes were identified: (1) impact of admission on mental health, (2) communication, (3) role of different systems, and (4) knowledge and skills. Supporting Information S1: Appendix C shows how the themes

represent the codes, with example quotes from the interviews. Five parents responded to confirm that the themes accurately captured their experiences and comparison of the first author's themes with those extracted by three other authors showed considerable overlap.

3.2.1 | Theme one: Impact of admission on mental health

Impact of paediatric ward environment

Several parents reported that the ward environment was loud and busy, which contributed to CYP's psychological distress. Being on a ward with patients of all ages was seen as unhelpful and age-appropriate areas with private spaces were desired. Having single sex wards was suggested by one parent as her child was distressed by a boy being on the ward. The majority of parents described long periods of

waiting, which was frustrating and particularly so when they did not feel kept up-to-date by paediatric staff.

Trigger for recovery

For several families, going into hospital was seen to instigate recovery as it allowed access to treatment that enabled their child to start eating. One parent talked about the boundaries of the hospital environment encouraging their child to eat. It was helpful when there was a clear treatment plan of what to eat and when, and clarity around what happens when the young person does not eat. Many parents reported that the hospital admission made both them and their child realise the severity of the situation. One parent described how being admitted to hospital almost validated the ED and encouraged her child to eat after having reached the goal of a hospital admission.

Child distress

Hospital admissions were in general a distressing experience for CYP and parents reported their children being exhausted and not able to think clearly due to the impact of their low weight. Being around other patients with a variety of illnesses was both helpful in normalising illness and also distressing, particularly when other patients had mental health problems and were admitted for self-harm and suicide attempts. Medical interventions contributed to young people's distress. Nasogastric tube feeding sometimes acted as a deterrent to refusing food and was particularly upsetting when it was required. One parent reported that medical interventions such as blood tests contributed to subsequent fearfulness of medical tests.

Parental distress

The hospital admission was understandably upsetting for many parents although some felt relieved by having access to treatment and additional support. Two parents described feeling blamed by professionals for the severity of their child's health. Managing care for siblings and work commitments was challenging, and several parents took turns supporting their child in hospital. This was made more difficult by the Covid-19 pandemic limiting the number of people allowed in hospital. A common concern was that parents felt worried about continuing treatment on their own at home post-discharge.

3.2.2 | Theme two: Communication

Information sharing

Despite being sent to hospital by a community mental health team or GP, many families reported that the hospital was not expecting their arrival, meaning they

had to repeat distressing information often to several staff members. When families were able to go straight to a children's ward this was particularly helpful. A lack of communication from paediatric and CAEDS staff was frequently reported, such as why medical procedures were being administered, and when CAEDS staff were planning to visit. When multiple services were involved, it could be confusing for parents to know who was in charge and who to liaise with. Views on collaborative working between the hospital and community teams varied, with some parents seeing it as seamless and others seeing the teams as very separate. Some parents felt being in hospital allowed their child to open up to them, although some became withdrawn and angry, which was challenging for parents.

Unintentionally unhelpful comments

Most parents felt that paediatric staff were skilled at engaging their child, which was seen to influence the perceived benefit of the admission. A few parents commented that one or two paediatric and CAEDS staff members made comments perceived by their child as unhelpful; saying that they were not the worst anorexic patient and praising them for eating were not received well. One parent commented that staff saying their child's weight out loud was distressing for their child. However, another parent thought it unhelpful when a clinician had suggested their child avoids looking at the weighing scales, which highlights the challenge for staff of attending to individual preferences.

3.2.3 | Theme three: Role of different systems

Hospital team

Most parents felt well-supported by paediatric staff and were extremely grateful for their input. Paediatric treatment was seen to be focused very much on physical health, which parents saw as understandable. However, they felt more psychiatric/psychological input was needed during the admission. Facilities such as the teen lounge, kitchen, and art materials were very much appreciated by parents particularly when CYP were admitted for longer periods. Some parents found it helpful when the hospital team adopted authority and took control over their child's care, except for one parent who found this overpowering.

CAEDS

Many parents valued the input from the CAEDS whilst in hospital and felt it provided the welcomed psychiatric support they felt was needed. Having the same staff member visit whilst in hospital and following discharge

was seen as very useful, and particularly important for young people with autism who can find it difficult to interact with multiple people. Most families had clear plans at discharge that were developed collaboratively with the hospital and community services. Discharge was seen as more confusing when CYP were being transferred to a psychiatric unit compared to when they were returning home, and parents reported wanting better communication from the services involved.

Crisis team

Some parents reported that the crisis team's input was helpful in hospital and during the transition home, though some would have liked them to have more ED knowledge and expertise. One parent felt more intensive crisis input was needed at home as their child's ED became very severe following the paediatric admission.

Parents

Many parents felt that the responsibility to get their child to eat remained largely with them despite paediatric staff support. However, one parent described how her parental role changed significantly in hospital. Before the admission she spoke of holding an authoritative role as it was her sole responsibility to encourage her child to eat. However, when the hospital staff took charge, she was more able to support her child emotionally and she felt this was particularly helpful for fostering their relationship.

3.2.4 | Theme four: Knowledge and skills

Understanding eating disorders

Most parents felt that paediatric staff were skilled and supportive but that there was inconsistency in the level of knowledge of EDs and mental health difficulties. They reported that paediatric staff were not always equipped to manage strong emotions unless they had previous experience or a special interest in mental health, which was particularly valued by parents when evident. One parent shared that medical risks were not always identified before the hospital admission and shared that their child specifically requested for care coordinators in the CAEDS to have more medical training. Three parents felt that the CAEDS did not always pick up when CYP were concealing the ED, such as hiding objects in clothing when being weighed.

Autism

One parent spoke about the importance of prioritising autism when EDs are being assessed as she described how direct leading questions about ED symptoms

enabled the development of an ED for her child. She shared how her child had restricted eating due to fears of puberty-related bodily changes and clinicians' assumptions about behaviours being due to an ED overshadowed the identification of autism and taught her child to be anorexic. The ward environment and input from the CAEDS was seen to be inappropriate and harmful for her child. This parent highlighted the need for individualised care as a 'one size fits all' approach can be unhelpful especially for CYP with autism.

4 | DISCUSSION

This project highlights the important role that paediatric care may play in the treatment of CYP with severe EDs. The data indicate that there are factors that appear to be implicated in the difference between some CYP returning to community-based care and some requiring more intensive psychiatric input following a brief paediatric admission. While it is tempting to infer causality, these are only associations and should be interpreted with caution. There has been no exploration of how these factors interact. Indeed, all these factors can be thought of as proxies for heightened distress and poorer health—they may be useful indicators to consider who may require subsequent inpatient care, and potentially to consider *when* to offer that care, thus allowing clinicians in the CAEDS to reduce the risk where possible and facilitate smoother transitions between services when required.

Most effect sizes were of small to medium magnitude, although one variable was linked to a large effect size: the duration of crisis team input following a paediatric admission. This might reflect a variety of issues that the service provides intervention for, from symptom severity to family functioning and stress. As this variable appears to have a more sizeable effect on treatment trajectory, targeting interventions provided by the crisis team following a paediatric admission may be particularly useful in reducing the risk of longer-term inpatient care, which is consistent with evidence from systematic reviews (Carpenter et al., 2013; Edwards et al., 2023). Furthermore, the data suggests that treating comorbid anxiety and depression alongside management of an ED may be another useful approach in reducing the risk of longer-term inpatient care being required, and there is evidence that doing so can improve response to treatment and outcomes (Hambleton et al., 2022). It is important to acknowledge that not all variables differed significantly between the groups; the severity of self-reported ED symptoms, %mBMI, clinical impairment, physical risk, self-harm and suicide risk, and self-reported anxiety and

depression were similar across both groups. The finding that severity of ED symptoms and %mBMI do not appear to be associated with differences in treatment trajectory is particularly interesting and suggests specific illness-related factors may play a larger role, over and above core ED pathology, in whether longer-term inpatient psychiatric care is needed. That is, CYP do not seem to simply be more unwell when admitted to a paediatric hospital, but factors associated with being unwell appear more important in identifying when further inpatient care may be required. However, this is at odds with Banks and Wood's (2023) finding that lower %mBMI increased the likelihood of transfer to a psychiatric unit. Whilst it is unclear why, it points to the importance of further research exploring this area.

Interviews with parents shone light on the variety of views and experiences. The feedback highlighted that paediatric admissions provided valuable input in the management of EDs and their efficacy could be enhanced by bolstering useful components. Paediatric admissions did seem to instigate recovery for some families by helping them to realise the severity of their child's health. This finding adds weight to the wider literature suggesting that paediatric admissions can encourage readiness to change (Bravender et al., 2017; Chapman et al., 2023), a mechanism which predicts success in ED treatment programs (Bewell & Carter, 2008). Attending to families' perception of the severity of the illness and their motivation to change may help clinicians use paediatric admissions to maximal positive effect. It may be beneficial to discuss the usefulness of paediatric admissions with families and share factors that others have found helpful. Exploring concerns, pre-empting difficulties around communication, and providing written information about EDs could improve perceptions of support and lead to more positive outcomes.

In summary, this project suggests that CYP with shorter paediatric admissions, shorter known duration of EDs, fewer comorbidities and less prior crisis team or hospital input may be at decreased odds of future psychiatric hospitalisation. However, causal relationships are not possible to infer, and the qualitative results suggest a complex picture with some families finding paediatric admissions a trigger for recovery while others reporting them being a source of distress for the whole family. As such, it is impossible to draw any definite conclusions about the benefits of early paediatric admission. If further research substantiates these preliminary findings, it would reinforce the value of early intervention in EDs, which underlies the ethos of AWTS and the FREED programme for those aged 16–25 presenting with an ED (<https://freedfromed.com.uk>) to provide early access to specialist support.

4.1 | Recommendations

This project highlights the potential value of paediatric admissions for some families and provides useful information about harnessing factors associated with positive outcomes. This importantly includes the value of CAEDS and paediatric staff working together to meet the needs of CYP and their families, as recommended by the AWTS. Attending to factors associated with differences in treatment trajectory could help clinicians to identify CYP at higher risk of requiring subsequent inpatient care, leading to opportunities to plan interventions to maximise the effectiveness of community-based care. Table 3 provides recommendations for the CAEDS based on the findings reported above.

4.2 | Limitations

There are important limitations to consider when interpreting the findings. First, missing data for some of the study variables meant that the power of the statistical tests is likely to have been reduced. Attempts were made to access hospital data where available, but large amounts of incomplete data remained for psychometric tests in particular. The reason for missing data is unclear but is possibly due to service users declining to provide information and/or data not being transferred to the service's database. Second, as with all qualitative research the themes derived from the interviews will be prone to bias and will have been influenced by the first author's epistemological stance. However, the checking of theme development with parents and the inter-rater reliability check will have mitigated this somewhat. It is important to note that the theme related to autism came from just one parent, and whilst it highlighted an important topic, it does make it difficult to generalise to other families. Third, the project took place during the Covid-19 pandemic and not all families were routinely approached based on care coordinators' views of families' distress levels, which will have introduced a selection bias for the interviews. The pandemic also limited the ability of crisis staff and CAEDS staff to visit CYP and their parents on the ward, which may have affected their perceptions of support. Fourth, comorbidity rates may be underestimated as it is possible that additional diagnoses were not known about or recorded consistently. According to the RCADS data available, 10%–18% of CYP scored above the cut-off of 65 for clinical rates of anxiety, and 18%–23% for depression (depending on child and parent ratings), suggesting rates are higher than recorded in the comorbidity column of the database. Fifth, the only medical severity

TABLE 3 Recommendations for the service based on the study findings.

Recommendation 1	
Strategically using paediatric admissions	Paediatric admissions appear most effective when used for brief periods earlier in the course of illness. Although they are only used when a patient is physically compromised, planned admissions taking place at the earliest opportunity when required could be useful for intervening before the ED warrants longer-term inpatient psychiatric care.
Recommendation 2	
Making transitions between hospitals smoother	When CYP are identified as being at higher risk of requiring subsequent inpatient psychiatric care, clinicians could begin preparing for a psychiatric admission sooner to facilitate smoother transitions between services, which may also perhaps reduce out-of-area admissions. This will require effective communication and collaboration between staff from the CAEDS, paediatric hospital, and psychiatric units.
Recommendation 3	
Treating comorbidities	It would be helpful to prioritise treatment of anxiety and depression alongside an ED through the use of anxiolytic and antidepressant medications or additional psychological support.
Recommendation 4	
Mobilising the family	For some families, brief paediatric admissions made both the young person and their parents realise how severe the illness had become, which instigated recovery. Therefore, it would be useful to attend to families' perception of illness severity and their motivation to change. Clinicians could discuss the usefulness of paediatric admissions with families and share factors that others have found helpful.
Recommendation 5	
Improving collaborative working	Increased contact, for example, through regular debriefs, between CAEDS and paediatric staff could help staff to learn from admissions and make good use of the expertise of both teams.
Recommendation 6	
Improving understanding of EDs among staff	Providing training sessions and workshops could improve the knowledge and skills of paediatric staff in managing EDs and psychological distress and could help to improve the provision of psychiatric/psychological care that many parents felt was needed in hospital. Training could be offered through joint training or away days for paediatric and CAEDS staff, and CAEDS staff could contribute to induction training for all new paediatric staff.
Recommendation 7	
Improving understanding of EDs among parents	Disseminate information leaflets and resources about EDs for parents to read in hospital during the admission. It would be useful to include information such as the medical risks of an ED, links to online/written resources, and what other families have found helpful to promote recovery.
Recommendation 8	
Allowing families to bypass A&E when referred by a medical professional in the community	Reinforce existing processes between the hospital and CAEDS through which families can bypass A&E and go straight to the children's ward when it has been pre-agreed that they need to be admitted. This tends to already happen when families are referred by the CAEDS, but it would be helpful to set up this arrangement when referred by other sources, such as GPs.

(Continues)

TABLE 3 (Continued)

Recommendation 9	
Providing emotional support to parents	Prioritise the provision of emotional support for parents as well as their children. This could be in the form of pre-planned, regular contact from staff from the CAEDS or the crisis team, information leaflets and links to online/written resources, and parent support forums, such as the psychoeducational support groups for parents recently set up by the CAEDS.
Recommendation 10	
Improving communication	Clinicians should prioritise enhancing communication channels between services and the family during admissions, particularly regarding treatment plans, medical procedures, transfers between units, and when the CAEDS is visiting the family in hospital. It would be useful to provide information to the family about key staff members to liaise with as it can be confusing when multiple services are involved.
Recommendation 11	
Improving autism awareness	Provide paediatric and CAEDS staff with ongoing autism training, make reasonable adaptations to treatment and use appropriate tools that improve communication with CYP with autism and EDs, such as communication passports developed by the PEACE pathway (https://www.peacepathway.org). Autism training could be included in the induction of new paediatric and CAEDS staff.
Recommendation 12	
Targeting support provided by the crisis team	Families receiving support from the crisis team for longer periods following a paediatric admission appear at greater risk of their child requiring psychiatric inpatient care. Whilst crisis teams are highly skilled, it could be useful for the CAEDS and crisis team to work more closely together to identify ways of enhancing the support they provide to CYP with an ED. CAEDS staff could provide the crisis team with specialist ED knowledge through ongoing training and closer liaison.

variables were %mBMI and duration of illness, which are insufficient alone to give a robust sense of medical compromise and how that may have affected outcomes. Local criteria for paediatric admissions were based on Junior MARSIPAN (2012) national guidelines at the time of the study, which have since been updated to MEED (2022). The guidelines specify medical and non-medical reasons for admissions, including the need for intravenous fluids to correct electrolyte abnormality, re-feeding for severe malnutrition, or respite for the family. However, they do not provide an algorithm for risk assessments, therefore the decision to admit relies on skilled clinicians conducting thorough assessments based on a multitude of factors. Lastly, the type of statistical tests used allowed group comparisons to be made but lacked predictive value to explore causal relationships. Therefore, further prospective research is imperative for better understanding predictors of treatment trajectories.

4.3 | Conclusions

Notwithstanding the limitations described above, this project is important in helping services to explore the role of paediatric admissions as a component of the ED treatment pathway for CYP. Specifically, it aimed to better understand ways to prevent long-term inpatient care for CYP with EDs. Whilst being unable to draw any robust conclusions, our results identify specific factors that appear to be associated with differences in treatment trajectories. Collecting parental perspectives offered unique insights into how families experience paediatric admissions and underscores the value of seeking feedback from service users, which could be integrated more into routine practice such as through regular online feedback forms. It would be useful to evaluate the effect of any changes implemented following this service improvement project, such as the impact of staff training, information leaflets or provision

of emotional support for parents. Future research should explore ways to better utilise brief paediatric admissions and community-based care models to prevent long-term inpatient care.

AUTHOR CONTRIBUTIONS

Shama El-Salahi: Conceptualization (equal); formal analysis; investigation; methodology (equal); project administration (lead); resources (equal); visualization (lead); writing – original draft (lead); writing – review & editing (lead). **Ciorsdan Anderson:** Conceptualization (equal); methodology (equal); project administration (equal); supervision (equal); visualization (equal); writing – original draft (equal); writing – review & editing (equal). **Alannah McDaid:** Project administration (supporting), writing – review & editing (equal). **Amy Lunn:** Project administration (supporting), writing – review & editing (equal). **Emily Ralph:** Project administration (supporting); writing – review & editing (equal). **Joanna Holliday:** Conceptualization (equal); methodology (equal); project administration (equal); resources (equal); supervision (equal); visualization (equal); writing – original draft (equal); writing – review & editing (equal).

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CONFLICT OF INTEREST STATEMENT

Four of the authors (JH, AM, AL and ER) were clinicians who worked in the clinical service whilst this project was being conducted. Attempts were made to be objective in the interpretation of the study findings and in this article; however, we acknowledge that their involvement in the project may add an element of bias.

DATA AVAILABILITY STATEMENT

The data associated with this research is not available as service users did not provide consent for data sharing and there is a possibility for confidentiality to be violated by sharing the interview transcripts. The study measures are widely available and are therefore not included with this manuscript. However, the interview schedule is included in the appendix.

PATIENT CONSENT STATEMENT

Informed consent was not required for the quantitative data analysis, and it was implied through voluntary participation in the interviews. Verbal consent to audio-record the interviews was gained at the start of each interview.

ORCID

Shama El-Salahi  <https://orcid.org/0000-0002-4160-9264>

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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