

A snapshot in time: a 1-month review of all referrals to paediatric liaison psychiatry services in Dublin following emergency department presentation

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Introduction: An emerging picture has seen increasing numbers of young people with mental health crisis attend paediatric emergency departments in Ireland. Following paediatric review, many are referred to in-house paediatric liaison psychiatry (PLP) services. This pilot study describes referral patterns and practice over a 1-month period across three Dublin centres.

Methods: Case notes of all referrals to PLP were reviewed to extract relevant clinical and administrative data. For those admitted, costs associated with length of stay were estimated. Clinical profile, management and intra-hospital pathway differences were explored.

Results: Fifty-nine young people under 16 years presented to one of the three EDs with an acute MH presentation. The sample consisted of 39 females (66%) with a mean age of 13.7 years. The majority ($n = 34$, 58%) presented out of hours. A substantial portion of youths presenting ($n = 37$, 63%) were admitted, and had a mean duration of stay of 4.51 days. There were differences between hospitals in terms of frequency of presentation with self-harm, admission rates and length of stay.

Discussion: Different PLP service configuration, staffing and funding streams may explain some of the differences observed across centres, although the findings should be interpreted with caution given the limited sample size. Standardisation of service provision and management is needed for PLP services. Additional community CAMHS resourcing is needed to support the development of alternative pathways for youth in need of urgent MH review.

Received 17 October 2019; Revised 09 March 2021; Accepted 17 March 2021; First published online 28 April 2021

Key words: Emergency child and adolescent psychiatry, emergency department, paediatric liaison psychiatry, self-harm.

Introduction

There is increasing recognition of the impact of paediatric mental health presentations to hospital services in Ireland. Mental health difficulties in children and adolescents are both prevalent and impairing, with accepted worldwide rates of 10–20% (Kieling *et al.*, 2011). Recent data highlight that mental illness contributes substantively to the disability burden, with depressive disorders ranked as the third most common cause of years lived with disability in youth – a compelling case for early intervention and adequate resourcing of paediatric mental health (WHO, 2014; Kyu *et al.*, 2016). Specialist service use in Ireland has increased in line with international experience, with a 26% increase in referrals to Child and Adolescent Mental Health Services (CAMHS) between 2012 and 2017 (HSE National Service Plan, 2018). Mental health-related service utilisation is increasing at a

greater rate in the acute care sector in many countries (Gandhi *et al.*, 2016). Rates of presentation with self-harm (SH) have increased by over 60%, prompting the development of innovative service models (Ougrin *et al.*, 2013; Kwok *et al.*, 2015; Morgan *et al.*, 2017; Ougrin *et al.*, 2018). There is no city-wide dedicated emergency/crisis CAMHS service in Dublin, leading young people with acute mental health crisis to present to an adult (if aged 16–18) or paediatric (aged under 16) emergency department (ED).

Liaison psychiatry services, also known as psychological medicine services, play a critical role in the assessment and management of hospital attendees with mental health concerns. For youth aged age 16, this is provided by liaison psychiatry services in the three Dublin-based paediatric hospitals. These services support both acute presentations to the ED (where psychiatry input is necessary on an urgent basis) and support the mental health needs of young people with chronic medical conditions attending the paediatric centres. The development and benefits of these services, including their contribution to improved and cost-saving medical care, have been described in other countries

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(Kraemer, 2010; Garralda & Slaveska-Hollis, 2016; Adejumo *et al.*, 2018). So too have the associated challenges in terms of balancing the needs of providing care for in-house patients, with those of out-patients and emergency presentations. Increasingly in the absence of available out-of-hours CAMHS, paediatric liaison psychiatry (PLP) services have provided crisis care for youth unable to access community CAMHS (McNicholas, 2018). Imminently, a new Children's hospital for Ireland will see the merging of existing PLP services at one site. The lack of knowledge of current service configuration and pathways across hospitals represents a threat to effective planning. This study overviews service delivery and describes a 1-month detailed 'snapshot' of all such presentations across the city.

Methods

All young people presenting to any of the three paediatric EDs and referred for urgent review by PLP services in November 2016 were identified. Case notes were reviewed using a study specific pro forma previously developed (Lynch *et al.*, 2017). Clinical details, including the main reason for presentation, psychiatric and medical diagnoses and socio-demographic details, were extracted. Other details such as time and method of presentation, prior CAMHS contact and outcome of assessment were collected. Reported SH and Suicidal ideation (SI) were recorded. Where young people were admitted to a paediatric hospital bed, the total and average length of stay was calculated and associated costs estimated. PLP Service configuration and activity was established with reference to published hospital activity data, interviews with providers and utilising a data capture tool for the 1-month period in question at all sites.

Paediatric liaison psychiatry service configuration: Service configuration: Two of the Dublin-based specialist paediatric centres are stand-alone paediatric hospitals – at Our Lady's Children's Hospital, Crumlin (OLCHC) and Children's University Hospital, Temple Street (CUH). (Our Lady's Children's Hospital Annual Report, 2016; Temple St Children's University Report, 2016). The third centre, the National Children's Hospital (NCH), is co-located with Tallaght University Hospital (Tallaght Hospital Annual Report, 2016). CUH has a large out-patient cohort, offering liaison mental health supports to patients with ongoing co-morbid medical and mental health conditions. Minimal out-patient work is carried out in NCH and OLCHC.

Services during normal working hours: In all hospitals, during normal working hours, cases are seen in the ED, unless a medical admission is immediately indicated. CUH (Hospital 3) sees young people using a Multi-disciplinary Team (MDT) approach with

disciplines from MH Social work, Psychiatry and MH nursing. Young people are typically seen within 4 hours of presentation. This involves using a day-time MDT staffed duty/emergency rota, where young people are seen together with parent/guardian and also separately by team members. Non-urgent referrals are also accepted, and CUH provides MH support to a large out-patient cohort. PLP services are provided by psychiatry and MH nursing staff in both OLCHC (Hospital 1) and NCH (Hospital 2), with input from other teams in the hospital, for example, social work, on a case by case basis. Here, PLP primarily supports the ED and wards, with very little support available for out-patient work.

Emergency/out-of-hours provision: CUH has a 24-hour on-call service, delivered by psychiatry staff from CUH PLP and psychiatry CAMHS colleagues in the area. This also involves providing cover to the local adolescent inpatient CAMHS unit. OLCHC has a 9 a.m.—5 p.m. service Monday–Friday and sessional weekend delivery between 9:30 a.m. and 12:30 p.m., whilst NCH has longer weekend cover from 9 a.m. to 7 p.m. The general hospital activity for the period of this audit is given in Table 1 below.

Results

Overview of the Clinical case profile: 59 young people attended one of the three paediatric EDs during the study period and were referred to the PLP Services. The mean age was 13.7 years, 66% ($n = 39$) were female with 58% ($n = 34$) attending outside normal working hours (Table 2). Thirty-seven youths (63%) were admitted, the vast majority for a very brief stay of 1 day or less (24, 65%). Of those admitted, a small proportion of 22 youths (60%) required one-to-one 'special' nursing for an average of 5 days.

The majority of youth who presented were previously known to mental health services ($n = 43$, 73%) and had been struggling with MH difficulties for 6 months or longer (Table 2). Children who were previously known to CAMHS were indistinguishable from those presenting with new MH difficulties for the first time on all measures. Although CAMHS attendees had higher percentage presentations within normal working hours (56% compared to 38% of new cases), this did not reach statistical significance ($\chi^2(1) = 3.285$, $p = 0.07$). Similarly, known CAMHS attendees had a non-significant lower percentage admission compared with new MH cases (83% *v.* 94%, $\chi^2(1) = 3.205$, $p = 0.073$). CAMHS attendees were also no more likely to require special nursing or to be rated as requiring high clinical intensity.

SH and/or SI represented 80% of presentations ($n = 47$). More than half ($n = 33$, 55.9%) of patients

Table 1. Paediatric hospital activity over the 1-month audit

	OLCHC Hospital 1	NCH Hospital 2	CUH Hospital 3
Inpatient cases	10 855	6262	15 658
Day cases	18 965	2304	7508
ED cases	38 079	33 743	56 300
General OPD	80 190	30 543	68 934
ED referrals	<i>n</i> = 12	<i>n</i> = 15	<i>n</i> = 32
Mental health department team configuration	Medical model: Psychiatry & nursing only Predominantly inpatient and ED consultations	Medical model: Psychiatry & nursing only Predominantly inpatient and ED consultations	Multi-disciplinary team model: Psychiatry, nursing, SW, OT, SALT Inpatient, ED consultation and routine liaison out-patient work (for young people with ongoing medical conditions and related MH disorders in OPD)

Table 2. Socio-demographic information

ED presentations (<i>n</i> = 59)	Across the three hospitals
Female	39 (66.1%)
Mean age in years	13.69 (s.d. 1.49, range 8–15)
Ethnicity (<i>n</i> = 40, 19 missing)	White: 35 (59.3%)
Living with both parents	25 (42.4%)
Child in care of social services	8 (13.6%)
Outside normal working hours (ONWH) (before 9 a.m. or after 5 p.m. Monday–Friday or any time at weekend)	34 (57.6%)
Method of arrival (<i>n</i> = 56, 3 missing)	Private: 41 (73.2%) Ambulance: 13 (23.2%) Police: 2 (3.6%)
Primary MH diagnosis (see Table 3 for further details)	28 (47.5%)
MH disorder > 6 months duration (<i>n</i> = 53, 6 missing)	40 (67.8%)
Current deliberate self-harm (DSH)	33 (55.9%) of whom 22 were admitted, or 67%
Suicidal Ideation (SI)	29 (49.2%) of whom 21 were admitted, or 72%
ANY current SI or DSH	47 (70%) of whom 31 were admitted, or 66%
Previously known to CAMHS	43 (72.9%)
Prescribed psychotropic medications	19 (32.2%)
Admitted to ward	37 (62.7%)
Length of stay (LOS) in days (mean, s.d., range) for ALL those admitted (<i>n</i> = 37)	Mean = 4.51 (s.d.: 5.623), mode = 1, range 1–21
Length of stay (LOS) in days (mean, s.d., range) for those admitted with Self-harm/suicidal ideation (<i>n</i> = 31)	Mean = 3.97 (s.d. 4.889), median = 1, range 1–21
Total LOS (days) for <i>n</i> = 37 admitted	167 days (of which 123 days for those with SH)
1–1 'special' nursing required (for <i>n</i> = 37 admitted)	22 (59.5%)
1–1 'special' nursing (<i>n</i> = 16) (days)	Mean = 5.44, (s.d.: 6.366), mode 1, range 1–21
Total one-to-one Nursing (days)	87 days for 22 young people
Total admission cost (bed days only, not inclusive of 1:1 nursing)	€163 660 total, or €4423 per patient admitted (167 bed days × 980 unit cost)

presented with current SH, the most common method being overdose (*n* = 20, 34%) followed by self-cutting (*n* = 10, 17%). Almost half of all cases (*n* = 29, 49.2%) presented with current SI, with females (*n* = 21, 53.8%) outnumbering males (*n* = 8, 40%). Young people presenting with SH (*n* = 44) were significantly older

(mean age 13.73 *v.* 12.89; χ^2 (1) = 5.976, *p* = 0.012), and there was a non-significant higher percentage of females (28, 64%) in this group (χ^2 (1) = 2.43, *p* = 0.086). Those with SH were significantly more likely to present outside normal working hours (*n* = 29, 66%; χ^2 (1) = 5.976, *p* = 0.012). Although the

Table 3. DSM-V multi-axial descriptions for all presentations

<i>n</i> = 59	
Axis I	Yes, <i>n</i> = 28 (47.5%)
Psychiatric diagnosis	None, <i>n</i> = 31 (52.1%)
Axis II	Yes, <i>n</i> = 16 (27.2%)
Personality/ID diagnosis	None, <i>n</i> = 43 (72.9%)
Axis III	Yes, <i>n</i> = 14 (23.7%)
Medical Diagnosis	None, <i>n</i> = 45 (76.3%)
	Medical conditions were listed in 25 cases, 20 children had no co-morbid medical illness. No data were recorded in 14 cases.
Axis IV	Yes, rated as negative: <i>n</i> = 34 (57.6%)
Psychosocial and environmental factors	Yes, rated as positive: <i>n</i> = 2 (3.4%) Missing: <i>n</i> = 23 (39%)
Axis V	CGAS rated on admission: <i>n</i> = 12 (20.3%)
Global assessment functioning	CGAS rated on discharge: <i>n</i> = 7 (11.9%) CGAS recorded in 1 hospital only

predominant working diagnosis in the cohort was that of an affective disorder (34, 77%), youths with SH were no more likely to have an Axis I diagnosis, to require special nursing, or to have had prior CAMHS contact, than those without SH.

The mean length of stay for those admitted (*n* = 37) was 4.51 days. Admitted youths with SH had a non-significantly shorter stay (mean of 3.97 days) than non-SH cases (mean stay of 7.33 days) ($t = 1.417$, $p = 0.165$).

Clinical presentation was often rated by clinicians as complex, while just under half (*n* = 28, 48%) of young people were felt to meet criteria for an Axis I psychiatric diagnosis at the time of presentation.

Admissions: Thirty-seven cases (63%) were admitted, with a mean duration of stay of 4.51 days (range 1–21 days). In one-third (*n* = 22, 37%) of cases, it was recorded that one-to-one ‘special’ nursing was required. The mean duration of special nursing was 5.4 days, totalling 87 days. This was often provided by a parent, but data are not consistently available across the three hospitals. If provided with a special, children were more likely to stay longer ($r = 0.410$, $n = 37$, $p = 0.012$) (Table 2).

Discharges: The majority of patients were ultimately discharged back to CAMHS (*n* = 43, 72.9%), or other primary care MH supports (*n* = 9, 15.3%). Following PLP assessment, five young people were not considered to require any specialised MH follow-up and were discharged back to their GP. A very small proportion were referred to inpatient child psychiatry units (*n* = 5, 8.5%), all of whom were previously known to CAMHS. Mean duration of stay was 9 days (range 1–21 days) for this group; three had required special nursing (mean duration 12.3 days,

range 7–21 days). Three of these young people had a clear Axis I diagnosis, and the others were referred for diagnostic clarification.

Results 2: estimating the costs of admission

Costs associated with the total length of stay for this cohort (167 bed days) were calculated using the most up-to-date cost for admission (€980) provided from the hospital accounts department at the time of enquiry (summer 2019). The estimated total costs during the 1-month study period was €163 660 (167 × €980) or €4423 per patient admitted.

Additional costs associated with one-to-one nursing were more difficult to establish as confidence in data available was deemed low. Only very rough estimates of one-to-one nursing may therefore be calculated. In some instances, support was initially provided by parent/guardian who remained with the child; in others rostered ward, nursing staff were assigned and, in other cases, dedicated agency staff were specifically requested. Some youth had a combination of all three. Twenty-two of the young people admitted needed special nursing, totalling 87 days. The costs presented are limited to day-time provision only, as it was not possible to calculate night-time costs given the lack of standardisation in data records. Daily agency one-to-one nursing rates at the time were €861, giving a total (*n* = 22) estimated cost of €74, 907, and a per patient rate of €3405. This is likely a considerable underestimate. Accepting the limitations of the estimates, this suggests that in the month audited, the total cost associated with either admission or special one-to-one nursing for this cohort of youth presenting to PLP with MH needs was €238 567.

Results 3: detailed exploration of pathways and inter-hospital differences

There were significant differences noted in clinical case profiles across the hospitals. Rates of SH were significantly lower in OLCHC (25%) compared to CUH (56%) and TUH (80%) ($\chi^2(2, n=59) = 8.186, p = 0.017$). Previous contact with MH services also differed, with rates of 100%, 47% and 75% ($\chi^2(2, n=59) = 9.753, p = 0.008$) (Table 4). CUH had a younger cohort presenting to the ED ($\chi^2(2, n=59) = 6.22, p = 0.045$) and admitted fewer cases (40.6%), compared to the other two hospitals admitting the majority (83.3% and 93.3%) ($\chi^2(2, n=59) = 14.837, p = 0.001$). This was not explained by a difference in out-of-hours presentations ($\chi^2(2, n=59) = 0.770, p = 0.680$) (Table 4). A Kruskal–Wallis test was conducted to explore the relationship of the specific hospital and length of stay where a young person was admitted. There was a statistically significant difference in length of stay across the three hospitals (OLCHC $n = 10$, Median = 6, TUH $n = 13$, Median = 1; CUH $n = 14$, Median = 1); $\chi^2(2, n = 37) = 14.215, p < 0.001$.

Discussion

This is a 1-month snapshot providing a city-wide review of the ED referrals to all three PLP services in Dublin. Adolescent females, arriving outside of normal working hours presenting with SH or SI, characterised the group seen. The majority were admitted, but in two hospitals, this admission was often to allow for a MH assessment, given the absence of an out-of-hours service. The majority of ED attendees were also previously known to mental health services, invoking the question as to whether attendance and possible admission to the paediatric hospital were dictated by clinical or service (lack thereof) factors. This study found that in hospitals without access to 24-hour on call service, admission rates were higher. The clinical profile of the three hospitals during this audit month was similar to previous descriptions of a PLP service over a 1-year period suggesting a valid sample (Lynch *et al.*, 2017). Hospital costs were significant overall but differed between hospitals, based on differing admission rates and length of stay.

Differences across the sites were also evident in terms of clinical profile, admission rates and request for special nursing. They also differed in relation to prior CAMHS contact. These differences may be explained in part by difference in PLP service staffing and structure across the hospitals, as well as hospital location. For example, CUH has a multi-disciplinary team operating by day and psychiatry-delivered 24/7 on-call service. In CUH, the rate of admission was lowest (40.6%), possibly reflecting that access to psychiatry

assessment was available overnight or rapid access to social work support during working hours. This allows rapid signposting of supports to empower families and carers experiencing significant psychosocial distress. It is plausible that assessments by different professionals may lead to a different formulation and treatment. MH-related crisis presentation in youth may also reflect social and family determinants. These may respond well to solution-focussed assessment and discharge, rather than require a more specialist MH interventions or admission. For some young people, admission may inadvertently disempower carers, reinforce to the child a belief that they are unable to safely manage their own emotional dysregulation and may exacerbate the situation confinement in a medical ward setting. Geographical differences may also be contributory, with variation in community support services (e.g. CAMHS, child protection services and other community support services). Inner city hospitals may receive a different cohort of young people, with more adverse social factors (Palmer *et al.*, 2014), including the cost of GP services, directing attendances at out-of-hours public services. Other countries have proposed a more integrative approach, combining GP cooperatives and EDs as one service (Van der Linden *et al.*, 2014). In Dublin, 'Dubdoc' found a favourable reduction in ED attendances for adults following the provision on an on-site, out-of-hours general practice emergency service (O'Kelly *et al.*, 2010).

The estimated bed cost linked to admission during this short study period was €163 660 or €4423 per patient admitted. Daily agency one-to-one nursing rates were additional, estimated at €74 907, giving a total estimate of €283 567. The high, yet 'hidden', costs to hospitals linked with MH presentations has previously been reported (Kehoe & McNicholas, 2018). Numbers of MH presentations to community and hospital EDs appear to be increasing with referrals to CAMHS reported as increasing by 22% over a 10-year period (2007–2016) (Griffin *et al.* 2018), and referrals to CUH ED increasing by 526% over an 11-year period, far outstripping the 7% overall ED attendance rate increase (Fitzgerald *et al.*, 2020). This disproportional increased demand on specialist and hospital services for youth with mental health difficulties is a source of concern and needs to be met with careful planning and ring-fenced resourcing. Costs associated with mental health admissions are not routinely available and need to be included to allow for effective service planning.

Standardisation of PLP services is a challenge throughout hospitals in Ireland, and the differing configuration and management of cases presented in this study reflect this. Reasons for service development and differences may reflect historic or clinical needs, cultural and academic perspectives, but often are

Table 4. Inter-hospital differences

	Hospital 1 OLCHC	Hospital 2 TUH	Hospital 3 CUH	All	Statistic
Number of ED presentations	12	15	32	59 (100%)	
Out of hours	7 (58.3%)	10 (66.7%)	17 (53.1%)	34 (57.6%)	n.s.
Admitted	10 (83.3%)	14 (93.3%)	13 (40.6%)	37 (62.7%)	$\chi^1 (2, n = 59) = 14.837,$ $p = 0.001$
Average length of stay (days)	mean = 6.67 (s.d. = 5.959)	mean = 1.27 (s.d. = 1.10)	mean = 2.13 (s.d. = 4.73)	mean = 3.67 (s.d. = 4.789)	$\chi^1 (2, n = 59) = 34.750,$ $p < 0.001$
Total length of stay	80 days	19 days	36 days	135	$\chi^1 (2, n = 59) = 34.750,$ $p < 0.001$
Total cost due to admissions	€78 400	€18 629	€35 280	€132 300	
Admission cost/patient admitted	€7840	€1330	€2714	€3576 per patient	
1-1 'special' by parent or nurse	9 (75%)	0	13 (100%)	23 (37.3%)	$\chi^1 (2, n = 59) = 16.370,$ $p < 0.001$
Duration 1-1 special (days)	$n = 12$ mean = 4.33 (s.d. 5.449)	$n = 0$	$n = 14,$ mean = 2.50 (s.d. 5.828)	$n = 26$ mean = 3.35 (s.d. 5.621)	n.s.
Previously known to MH services	12 (100%)	7 (46.7%)	24 (75%)	43 (72.9%)	$\chi^1 (2, n = 59) = 9.753,$ $p = 0.008$
Self-harm	3 (25%)	12 (80%)	18 (56.2%)	33 (55.9%)	$\chi^1 (2,59) = 8.186,$ $p = 0.017$
Suicidal ideation	8 (66.7%)	4 (26.7%)	17 (53.1%)	29 (49.2%)	n.s.
Axis I diagnosis	8 (66.7%)	5 (33.3%)	15 (46.9%)	28 (47.5%)	n.s.

heavily dictated by available resources. New initiatives are hampered by both work overload and clinician stress, both rife in this consultant group in Ireland where rates of staff burnout are high (Griffin *et al.*, 2018; McNicholas *et al.*, 2020). Nonetheless, recent cross city psychiatry and multi-disciplinary working groups have allowed some innovation including shared protocols in the area of youth with eating disorders to be developed, with an aim towards better standardisation. Given that there is an increased rate of mental health disorders in children with medical illness and that co-occurring medical and mental health disorders are drivers of increased patient complexity and higher costs (Ansari *et al.*, 2018), it is essential to provide adequate in-house, non-urgent PLP services. With the advent of the new National Children's Hospital, as three liaison psychiatry services will merge, there is an opportunity to explore retaining what works effectively while moving towards standardisation. There is also an opportunity to support the development of national liaison services.

This is challenging in the current environment for paediatric mental health. Despite the surge in ED presentations, vastly inadequate MH resources are provided to support paediatric hospitals. The national clinical programme for SH proposes to have ED-based nurses supporting young people who SH, and international efforts to support standardisation are evident (NICE, 2013; HSE National Clinical Programme, 2016). Community mental health services are also underresourced, with the average team having only 50% of the recommended levels, based on A Vision for Change (Mental Health Reform, 2015). Systemic wide approaches are necessary. Whilst some clinicians suggest that paediatric EDs are the safest place for mentally ill youth who present in a crisis (Kraemer, 2010), a mix of approaches is explored elsewhere. Community-based Dialectic Behavioural Therapy, cognitive-behavioural therapy, and mentalisation-based therapy have all been suggested as effective approaches for youth with SH or suicidality (Ougrin *et al.*, 2015). The provision of comprehensive and intensive community-based adult mental health outreach support was linked with a reduction in ED visits, frequency of hospital admissions, shortened stays and reduction in costs (Salkever *et al.*, 2014).

The recommendation of one PLP service per 300 000 population is not yet realised. 'A Vision for Change' (2006) and CAMHS Standard Operating Procedures (HSE, 2015), recognised the need for funding, support of out-of-hours call and the requirement for timely access to liaison psychiatry. The recent clinical operational guidelines (HSE, 2019), a follow on from the 2015 Standard Operating Procedures (HSE, 2015), omit any detail on service development with regard to

out-of-hours services. Health services for children in Ireland are entering a period of considerable change. The development of the National Model of Care for Paediatric Healthcare Services (HSE, model of care) and National Clinical Mental Health programmes (HSE, Mental health programmes) recognises the need to ensure that services are 'fit for purpose' and meet the changing demographics of society, including Ireland's multi-ethnic population, different family and cultural systems, as well as ongoing increases in psychiatric illness. Equity of access to services is crucial, and should apply equally for paediatric care and mental health care.

In terms of study strengths, there is a dearth of knowledge about the pathways for young people presenting to EDs in Ireland. While there are 19 paediatric units in the country, only three have dedicated in-house PLP service at the time of this study – and as this paper highlights, services in these sites are configured quite differently. This is the first paper to investigate service configuration, activity and operational procedures across the different sites and to explore some of the differences in terms of clinical profile, management (admission, discharge, onward referral etc.) and cost factors. This is increasingly important given the ever increasing pressures on services. This interpretation of the study findings are limited by the small sample size, and several of the analyses may be underpowered. The study is also limited by the short duration of the study period. Nonetheless it should be noted that the findings are consistent with previous reports from the involved services (Lynch *et al.*, 2017; Kehoe & McNicholas, 2018, McNicholas *et al.*, 2020).

Conclusions

This study reveals significant differences between three PLP services in terms of admission rates, duration of stay and use of special nursing. These findings are reported on a background of an under investment in CAMHS and supporting services in Ireland. The impact of hospital admission and management on the child and family is also unknown. The move towards one national paediatric hospital brings the opportunity for a standardised care pathway for youth with mental health difficulties to be developed, properly costed and resourced. Close collaborations with CAMHS will be a prerequisite to ensure both admissions and duration of stay are based on clinical need and not dictated by services shortfalls.

Acknowledgements

The authors would like to acknowledge the assistance of Dr Michelle Clifford who previously worked at

NCH, & Dr Claire Kehoe, SR, UCD medical students (Gretta Sheridan & Dalia Abualsaud) who assisted with or co-supervised data collection that made this paper possible.

Conflict of interest

The authors all affirm that they have no conflicts of interest to disclose.

Ethical standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation with the Helsinki Declaration of 1975, as revised in 2008. The authors assert that ethical approval for publication of this 1-month review was not required by their local Ethics Committee. The study received ethical exemption status in each participating centre from the local ethics committee. Data collection and storage adhered to data protection guidelines.

Financial support

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

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