RESEARCH ARTICLE

Child and Adolescent Mental Health Service Management Strategies that may Influence Wait Times

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Abstract

Objectives: (1) To describe the strategies employed by child mental health agencies to manage service demands; (2) to determine whether the types of strategies used are related to meeting Canadian Psychiatric Association (CPA) benchmarks and wait times; and, (3) to determine whether the types of strategies used are related to agency characteristics.

Methods: An online questionnaire was distributed to 379 agencies providing child mental health services in Canada. The survey inquired about agency characteristics, wait times, ability to meet benchmarks and a series of strategies which may impact wait times. Spearman's rank correlations were used to determine relationships between variables. Results: One hundred thirteen agencies returned adequately completed surveys (29.8%). Collaborating with other agencies/providers and referring families to self-help resources were the most commonly endorsed strategies. The use of more upstream/ pre-waitlist strategies was related to the ability to meet CPA benchmarks for urgent cases. No cluster of strategies was related to estimated wait times. Restriction strategies were most consistently related to agency size. Conclusions: Multiple strategies were endorsed by many agencies, but very few demonstrated relationships to wait time variables. Rigorous evaluation of commonly used service strategies are required to determine whether any positive impacts are being obtained by such efforts.

Key Words: wait times, waiting lists, mental health services, child



Résumé

Objectifs: (1) Décrire les stratégies employées par les organismes de santé mentale pour enfants afin de gérer la demande de services; (2) déterminer si les types de stratégies en usage tendent à satisfaire aux critères et aux temps d'attente de l'Association des psychiatres du Canada (APC); (3) et déterminer si les types de stratégies en usage répondent aux caractéristiques des organismes. Méthodes: Un questionnaire en ligne a été distribué à 379 organismes dispensant des services de santé mentale à des enfants au Canada. L'enquête cherchait à connaître les caractéristiques de l'organisme, les temps d'attente, la capacité de satisfaire aux critères, et une série de stratégies aptes à influer sur les temps d'attente. Les corrélations de rang de Spearman ont été utilisées pour déterminer les relations entre les variables. Résultats: Cent treize organismes ont renvoyé des questionnaires dûment remplis (29,8%). La collaboration avec d'autres organismes ou prestataires et le renvoi des familles à des ressources d'entraide étaient les stratégies les plus souvent adoptées. L'usage de stratégies plus en amont ou pré-liste d'attente était lié à la capacité de satisfaire aux critères de l'APC pour les cas urgents. Aucun groupe de stratégies n'était lié aux temps d'attente estimés. Les stratégies de restriction étaient habituellement liées à la taille de l'organisme. Conclusions: De multiples stratégies étaient adoptées par de nombreux organismes, mais peu d'entre elles démontraient des relations aux variables des temps d'attente. Il faut une évaluation rigoureuse des stratégies de services couramment en usage pour déterminer si des effets positifs résultent de ces initiatives.

Mots clés: temps d'attente, listes d'attente, services de santé mentale, enfant

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Submitted: June 17, 2012; Accepted: December 14, 2012

hildren and adolescents with mental health problems Cand their families may encounter significant variability in wait times for mental health services, with some facing substantial waits (Breton, Plante, & St-Georges, 2005; Kowalewski, McLennan, & McGrath, 2011; Reid & Brown, 2008; Smith & Hadorn, 2002). Excessive wait times may contribute to clinical deterioration and increased risk for suicide or hospitalization (Williams, Latta, & Conversano, 2008). Furthermore, the longer the wait, the less likely families are to attend appointments (Sherman, Barnum, Buhman-Wiggs, & Nyberg, 2009). A study that surveyed child and adolescent mental health services (CAMHS) agencies in Canada about wait times revealed that the estimated mean wait times for an initial assessment were 109.5 days for less severely ill children, and 3.4 days for the most severely ill children with marked variations between agencies (Kowalewski, McLennan, & McGrath, 2011). Concurrently, it was found that most responding agencies indicated that they did not meet a modified version of the proposed benchmark wait times set by the Canadian Psychiatric Association (CPA, 2006; Kowalewski et al., 2011).

Despite these concerns, the strategies employed by mental health agencies to address wait times are understudied, although there are a few exceptions. In one agency, the use of centralized intake was related to shorter wait times relative to a control site (Clemente, McGrath, Stevenson, & Barnes, 2006). A recent study reported lower wait times for CAMHS through collaboration with other service providers (Haggarty, Jarva, Cernovsky, Karioja, & Martin, 2012). Another study found improvements in outcomes for patients on a waiting list after the introduction of a brief self-help intervention (Lucock, Kirby, & Wainwright, 2011). An intervention that included centralized intake, regular team meetings, and weekly monitoring of patients on the waitlist demonstrated significant reductions in wait times and missed appointments, and found an association with fewer psychiatric hospitalizations and improved staff morale (Williams et al., 2008). A review article of strategies used to manage wait times in various other medical fields advocated for a greater use of paraprofessionals, and offering services at non-traditional times and at non-traditional sites (Kreindler, 2008).

Currently, the various types of strategies used by CAMHS agencies to manage service demands and the relationship of those strategies to wait times and benchmarks remain unknown in Canada. As such, the objectives of the current study were to: (1) describe the types of waitlist management strategies used by CAMHS agencies; (2) determine which types of strategies are related to wait times and ability to meet CPA wait time benchmarks; and, (3) investigate relationships between use of strategy types and agency characteristics.

Methods

Sample

The sample and procedures utilized in this study have been reported previously by Kowalewski and colleagues (2011); however, they are provided here in brief. Due to the high degree of variability in the organization of CAMHS across Canada, no single sampling frame was possible. In all provinces, except Ontario and Quebec, the provincial level contact for child mental health services within the health system was asked to distribute the survey to each of their province's health regions. In Ontario, Child Mental Health Ontario had a membership that included the largest number of CAMHS agencies in that province and distributed the survey to their membership. In Ouebec, the provincial contact within the Ministry of Health and Social Services released their contact list for agencies providing CAMHS at both hospital and community centres. Additional distribution included the membership of the Canadian Association of Paediatric Health Centres and the CAMHS units in British Columbia through their Ministry of Children and Family Development. A lead mental health contact in each of the three territories was also invited to participate in the survey. Invitation emails were sent to the aforementioned contacts and their distribution lists to recruit agencies to participate in completing the web-based survey (two follow-up reminder email invitations were also sent). In total, 379 CAMHS agencies across Canada were invited to participate in the study.

The Survey

The survey was informed by a qualitative research phase which entailed open-ended interviews with researchers, providers and administrators in the CAMHS sector across Canada to elicit descriptors of current practices to manage demands for their services. A list of all strategies identified from the qualitative interviews were extracted and formatted into draft surveys which were reviewed by both the management and partnership committees of the larger CIHR team grant, which consisted of administrators from a number of mental health agencies across Canada. After incorporating feedback, a final 41 strategies were included in the survey and participants were asked to indicate which they used in their agency.

In addition to management strategies, the survey included agency characteristics and details on wait times. The following were used to describe agencies: (i) the number of full time equivalent (FTE) clinical staff; (ii) the number of children admitted for at least one visit in the last 12 months; (iii) the number of children on a waiting list for ongoing regular treatment; (iv) the number of children admitted by the number of FTE clinical staff ("clinic load density"); and, (v) the number of children on a waiting list by the number of FTE clinical staff ("waitlist density").

Table 1. Characteristic	s of participating agencies			
Characteristic		Mean (SD)		
No. of FTE clinical staff		36.9 (59.1)	-	
No. of children admitted in	the last 12 months	560.3 (831.9)		
No. of children on a waiting	list for regular ongoing treatmenta	70.1 (93.2)		
No. of children admitted pe	r FTE clinical staffª	21.5 (25.2)		
No. of children on a waiting list for regular ongoing treatment per FTE clinical staff ⁶		4.3 (7.7)		
Wait times for low priority o	ases (days) ^c	110.5 (101.4)		
Wait times for moderate priority cases (days) ^d Wait times for urgent priority cases (days) ^e		76.6 (75.4)		
		29.6 (40.4)		
Wait times for extremely urgent priority cases (days) ^c		3.5 (7.0)		
Ability to meet CPA Benchmarks	24 hour wait time for emergent care ^f % (n)	2 week wait time for urgent care ^g % (n)	1 month wait time for scheduled care ^g % (n)	
Never	6.3 (6)	5.0 (5)	11.0 (11)	
Rarely	3.2 (3)	11.0 (11)	34.0 (34)	
Sometimes	10.5 (10)	20.0 (20)	23.0 (23)	
Mostly	34.7 (33)	34.0 (34)	21.0 (21)	
Always	45.3 (43)	30.0 (30)	11.0 (11)	
an = 111 (2 missing); bn = 109 (4 m	issing); °n = 108 (5 missing); ^a n=111 (2 missing); ^a n	=110 (3 missing); fn = 95 (18 missing);	⁹ n = 100 (13 missing)	

Two approaches were used to capture wait time indicators for agencies. Firstly, agencies were asked to estimate wait times to initial assessment for children with differing priority levels categorized as low (e.g. child who is avoiding group activities due to anxiety); moderate (e.g. child who is failing school secondary to serious ADHD behaviour); high (e.g. child who has been suspended from school for serious aggressive behaviour) and extremely high priority (e.g. child who exhibits serious suicidal or homicidal behaviour). Secondly, agencies were asked about their perceived ability of meeting modified CPA benchmark wait times by three clinical priority levels (24-hour wait time for emergent care, 2-week wait time for urgent care and 1-month wait time for scheduled care) (Canadian Psychiatric Association, 2006) using a five-point response scale (i.e. never, rarely, sometimes, mostly, always). These survey questions were modified to address the three clinical priority levels without the associated use of the adult sentinel diagnoses and to reflect the access to mental health services in general - not specifically psychiatrists.

Data Analysis

The two authors generated a preliminary set of domains to cluster the 41 individual management strategies. These same two authors then independently classified each individual strategy in one or more of the domains. The clusters and classified strategies were then reviewed and discrepancies were resolved through additional discussion and refinement of the original clusters. Forty of the strategies

were classified in one or more of the final five clusters: (i) upstream/pre-waitlist; (ii) specific management of waitlists; (iii) external resources; (iv) organization of treatment; and, (v) restrictions. The extent to which each CAMHS agency used these types of strategies was measured as a total score per cluster, which was determined as the proportion of strategies used within each cluster.

Spearman's rank correlations (ρ) set at a significance level of 0.01 to partially account for multiple statistical testing, were used to determine the relationship between types of strategies used and: (1) agencies' ability to meet CPA benchmarks; (2) wait times by clinical severity levels; and, (3) agency characteristics.

Results

Of the 379 agencies recruited for participation, 113 returned adequately completed surveys (29.8%). Agency characteristics are described in Table 1.

The frequency distribution of specific management strategies endorsed by CAMHS agencies is summarized in Table 2. The mean number of strategies was 21.4 (S.D. = 5.6, Range = 0-36). Only one agency reported not using any of the strategies. Collaborating with other agencies/providers, referring families to self-help resources, and rapidly responding to patients deteriorating on waitlists were the most commonly endorsed strategies. The vast majority of agencies used at least one strategy from each cluster.

Table 2. I Tequell	cy distribution of management strategies employed by agencies	Aganaiaa	
Strategy clusters	Strategy	Agencies, %	(n)
Upstream/	Standardizing the intake process	84.1	(95)
pre-waitlist:	Centralizing the intake process	76.1	(86)
(Strategies that may impact potential patients prior to consideration of placement on a	Providing early intervention services	69.9	(79)
	Incorporating triage into the intake process versus a first come first served approach	63.7	(72)
	Providing prevention services	38.1	(43)
	*Coordinating your intake function with other agencies	26.5	(30)
waitlist)	Any upstream/ pre-waitlist strategy	96.5	(109)
	Mean proportion of upstream/pre-waitlist strategies used by agencies: 60.3 (SD=24.0)%		(/
Specific	Providing a rapid response for patients who may deteriorate while on the waitlist	85.8	(97)
management of	Monitoring of patients on the waitlist	74.3	(84)
waitlist: (Strategies applied	Conducting regular team meetings to triage and plan for patients on the waitlist	70.8	(80)
to patients who	*Providing children access to medication while on the waitlist	38.1	(43)
are already on the	*Providing brief interventions prior to assessments	29.2	(33)
waitlist)	*Subcontracting triage and waitlist management	23.0	(26)
	Any specific management strategy	96.5	(109)
	Mean proportion of specific management of waitlist strategies used by agencies: 54.5 (SD=2		(/
External	*Collaborating with other agencies and/or providers in treatment and follow-up	91.2	(103)
resources:	*Referring families to self-help resources	87.6	(99)
(Strategies entailing the use	Referring or redirecting families to other agencies and providers	70.8	(80)
of resources	Coordinating your intake function with other agencies	26.5	(30)
outside of the given	Subcontracting triage and waitlist management	23.0	(26)
agency)	*Subcontracting care and treatment to other agencies and providers	16.2	(11)
	Any external resources strategy	96.5	(109)
	Mean proportion of external resources strategies used by agencies: 51.9 (SD=16.2)%		, ,
Organization of treatment:	*Collaborating with other agencies and/or providers in treatment and follow-up	91.2	(103)
	*Referring families to self-help resources	87.6	(99)
(Strategies involving the	Offering services at non-traditional sites (e.g. schools, home, primary care offices)	81.4	(92)
organization of the	Offering services at non-traditional times (e.g. evenings, weekends)	75.2	(85)
treatment)	Providing group intervention for children and families	72.6	(82)
	Providing emergent/urgent care services for families	66.4	(75)
	Offering community education programs	63.7	(72)
	Utilizing clinical pathways to guide care	56.6	(64)
	Providing single clinician-based assessments (as opposed to team assessments)	54.0	(61)
	Offering parent coaching by telephone	51.3	(58)
	Offering walk-in services (without appointment)	50.4	(57)
	Offering parent group sessions prior to additional treatment	41.6	(47)
	Structuring care along generic service tracks (as opposed to more specialized service tracks)	39.8	(45)
	Providing simultaneous multidisciplinary assessments (as opposed to multiple individual assessments)	38.1	(43)
	*Providing children access to medication while on the waitlist	38.1	(43)
	Replacing more expensive care providers with less expensive providers	33.6	(38)
	*Providing brief interventions prior to assessments	29.2	(33)
	Using more paraprofessionals to provide direct care	16.8	(19)
	*Subcontracting care and treatment to other agencies and providers	16.2	(11)
	Any organization of treatment strategies	99.1	(112)
	Mean proportion of organization of treatment strategies used by agencies: 52.9 (SD=16.3)%		, ,

Strategy clusters	Strategy	Agencies, %	(n)
Restrictions: (Strategies which place some limitation or restriction on service offerings)	Limiting services to the most severe groups only	53.1	(60)
	Restricting services to certain diagnostic groups (e.g., eating disorders; forensics)	43.4	(49)
	Restricting services to minority groups (e.g., First Nations, refugees)	38.9	(44)
	Restricting services to families within catchment area only	35.4	(40)
	Requiring parent group sessions prior to additional treatment	26.5	(30)
	Restricting services to a target age group	23.0	(26)
	Restricting services to interventions meeting evidence-based criteria	21.2	(24)
	Refusing new patients when the waitlist is excessive	15.0	(17)
	Restricting services to brief, time limited interventions	15.0	(17)
	Restricting services to children without developmental delay	11.5	(13)
	Any restriction strategies	86.7	(98)
	Mean proportion of restriction strategies used by agencies: 28.8 (SD=15.6)%		

Upstream/pre-waitlist was the cluster whose strategies were most extensively used.

The relationship between the ability of the agency to meet CPA benchmarks and the pattern of strategies used is shown in Table 3. The use of more upstream/pre-waitlist strategies demonstrated the largest positive correlations to a greater ability to meet CPA benchmarks, but this was only significant for the urgent care benchmark.

The relationship between the extent of use of different clusters of strategies and estimated wait times for different clinical severity levels are summarized in Table 4. None of the strategies were significantly related to estimated wait times.

The relationship between the size of the agency and the extent of use of different clusters of strategies used is shown in Table 5. Greater use of restriction strategies was related to larger agency size (indexed by number of FTE clinical staff and number of children admitted) as well as more children on a waitlist. In addition, a greater number of children on waitlists was related to a greater extent of use of specific waitlist management strategies.

The above analyses were conducted again with the removal of strategies that overlapped in multiple clusters and the results remained the same for all relationships with benchmarks and wait times.

Discussion

Collaborating with other agencies and providers was the most frequently endorsed strategy by CAMHS agencies. This is in line with several studies in mental health that have reported on collaboration efforts with other service providers (Craven & Bland, 2006; Haggarty, Klein, Chaudhuri, Boudreau, & McKinnon, 2008; Katon et al., 1999). It is also consistent with Senator Kirby's report which suggested that a collaborative care or shared service model may be

beneficial for improving access to services (Kirby & Keon, 2006).

CAMHS agencies that attempt to manage service demands using more upstream/pre-waitlist strategies may be more likely to meet CPA benchmarks. This type of waitlist management strategy includes centralizing the intake process, which was used and recommended as one of the strategies in a quality improvement study that reported positive results in eliminating wait times for general mental health services (Williams et al., 2008). The upstream/pre-waitlist strategies cluster also includes the use of a triage system rather than a first-come first-serve approach, which supports the need for prioritization of patients by clinical severity level as recommended by the Western Canada Waitlist Project (Noseworthy, McGurran, & Hadorn, 2003; Smith & Hadorn, 2002). Use of effective triage approaches might be reflected in the positive finding between the use of this cluster of strategies and ability to meet the urgent care benchmark versus scheduled care. Perhaps emergent care was not related given the alternative pathway to meet this benchmark, i.e., emergency services.

It was observed that having more children on a waitlist was related to the use of a greater number of restriction strategies. While order cannot be determined from this study, the relationship may reflect the application of restriction strategies in response to large numbers on the wait list. Additional research is needed to determine what the implications are of restriction strategies (e.g., what happens to children with mental disorders who are deemed ineligible for services).

Limitations

Given the cross-sectional nature of the study, it was not possible to draw conclusions on the sequence between the type of management strategy and ability to meet benchmarks or

Table 3. Correlation between the extent of use of different clusters of strategies and agencies' ability to meet Canadian Psychiatric Association (CPA) wait time benchmarks

	Ability to meet CPA wait time benchmarks by level of care				
Strategy category	24 hour wait time for Emergent care ^a rho (ρ)	2 week wait time for Urgent care ^b rho (ρ)	1 month wait time for Scheduled care ^b rho (ρ)		
Upstream/pre-waitlist	0.222	0.360*	0.115		
Specific management of waitlist	0.056	-0.047	-0.129		
External resources	0.008	0.035	0.027		
Organization of treatment	0.182	0.051	0.034		
Restrictions	-0.129	-0.166	-0.015		

^{*}p<0.01

Table 4. Correlations between the extent of use of different clusters of strategies and estimated wait times (days) at different clinical priority levels

	Wait time (days) by clinical severity/priority level				
Strategy category	Low ^a rho (ρ)	Moderate ^ь rho (ρ)	High ^c rho (ρ)	Extremely high ^a rho (ρ)	
Upstream/pre-waitlist	0.030	-0.029	-0.098	-0.150	
Specific management of waitlist	0.162	0.155	0.132	0.035	
External resources	0.059	0.011	0.069	-0.024	
Organization of treatment	-0.015	-0.049	-0.128	-0.207	
Restrictions	0.132	0.144	0.202	0.060	

No significant correlations were identified.

Table 5. Correlations between the extent of use of different clusters of strategies and agency characteristics

	Agency characteristics				
Strategy category	FTE clinical staff rho (ρ)	Children admitted rho (ρ)	Children on waitlist ^a rho (ρ)	Children admitted per FTE ^a rho (ρ)	Children on waitlist per FTE ^b rho (ρ)
Upstream/pre-waitlist	-0.096	-0.149	0.030	-0.080	-0.029
Specific management of waitlist	0.215	0.227	0.291*	-0.172	-0.082
External resources	0.078	0.050	0.057	-0.032	-0.166
Treatment organization	0.051	0.090	0.035	-0.053	0.041
Restrictions	0.311*	0.343*	0.257*	-0.157	-0.061

^{*}p<0.01

^an = 95 (18 missing)

an = 100 (13 missing)

an = 108 (5 missing)

^bn = 111 (2 missing)

on = 110 (3 missing)

^an = 111 (2 missing)

^bn = 109 (4 missing)

reduce wait times. However, the findings do identify the most commonly used strategies that ought to be prioritized for evaluation. A second limitation is the agency estimates used as measures of wait times and benchmark attainment. The lack of a stringent method or tool in practice to measure the time to obtain CAMHS may result in different criteria to measure or estimate wait times across agencies (Manion, 2010). In contrast, the measurement of wait times for other medical services may be more reliable. For example, wait times for joint replacement surgery may specifically measure the time between the specialist assessment to the explicit surgical intervention (Noseworthy et al., 2005); however, in mental health there are multiple providers, less clear links between providers, and less distinct points of treatment initiation (McLennan, Lavis, & Waddell, 2009). An additional limitation of this study is the low response rate. It is unknown to what extent responding agencies were representative of CAMHS agencies across Canada and whether they differed from non-responding agencies in terms of wait time management characteristics, which may impact the generalizability of the findings. Nonetheless, the agencies that did respond represent a diverse range in sizes. with catchment areas that serve both urban and rural districts from sites across Canada. Further research is clearly needed to obtain more data on wait time management for CAMHS and to determine the types of strategies most effective at decreasing wait times, while avoiding compromising, and preferably improving child, adolescent and family outcomes.

Acknowledgements / Conflicts of Interest

Thank you to the participating agencies for taking the time to complete the surveys. This research was supported by a Canadian Institutes of Health Research (CIHR) Team Grant (#79850). Ms. Vallerand was supported by a CIHR Canada Graduate Scholarship Master's Award and a Richard J. Schmeelk Canada Fellowship. The authors have no financial relationships to disclose.

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