Length of Pediatric Mental Health Emergency Department Visits in the United States

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Background: ED Overcrowding

- Emergency department (ED) overcrowding is common in the US
- Associated with poor patient outcome and strain on health care delivery systems
- Extended ED length of stay (LOS) in particular is implicated in departure of high acuity patients prior to receipt of care, ambulance diversion, and patient dissatisfaction

Background: ED MH Treatment of Youth

- Growing concern over delays in the ED mental health treatment of US youth
- Health professionals, medical associations, state health agencies, and the US Surgeon General concerned that critical shortages of inpatient and outpatient MH services force children and adolescents to seek care in EDs
- Limited available data suggest MH problems account for increasing number and proportion of pediatric ED visits
- Popular press accounts describe extensive delays in ED care of mentally ill youth

Background: Existing Data

- In one urban pediatric ED, youth receiving psychiatric care had a median 4.8 hours LOS
- In a children's hospital, mean LOS for pediatric MH visits declined from 4.3 to 2.2 hours following creation of a ED MH consultation team.
- One ED described a trend from '99 to '02 toward extended stays for pediatric MH visits.
- A national study of pediatric ED visits suggested severity of MH visits declined from '93 to '99

Objectives

- Test hypothesis that LOS for MH evaluation and treatment of youth exceeds LOS for non-MH visits.
- Compare patient, hospital, and treatment characteristics of pediatric mental health and non-mental health ED visits and assess factors associated with MH LOS.

Methods: Data Source

- Data from the National Hospital Ambulatory Medical Care Survey (NHAMCS), 2001-2006
- Nationally representative sample of visits to hospital EDs and outpatient departments by National Center for Health Statistics.
- 40,000 ED visits, including 10,000 pediatric visits, annually.
- NHAMCS uses probability samples of primary sampling units, short-stay or general hospitals within these units, emergency service areas (ESAs) within EDs and patient visits within ESAs.
- Data collected by hospital staff instructed by US Census Bureau. Across the 6 survey years, response rates varied from 89.4%-94.2%. Following NCHS recommendations, data from contiguous survey years were combined to derive more stable estimates.

Methods: Subjects

- Patients aged 18 years or younger
- Visits classified as MH visits based on the presence of a principal Dx of a mental disorder, *International Classification of Diseases, Ninth Revision, Clinical Modification* (*ICD-9-CM*) codes 290-319
- Other visits classified as non-mental health visits

Methods: Descriptive Analyses

- Annual population rates of visits were calculated as weighted annual means using annual US Census Bureau estimates for civilian non-institutionalized residents ≤18 years.
- Differences between MH and non-MH visits for categorical characteristics were tested for significance at the 5% level using a χ^2 statistic.
- Bonferroni adjustments for multiplicity
- Differences in median and mean LOS were considered significant if the 95% confidence interval (CI) for the difference excluded zero.

Methods: Regression Analyses

- Three backwards multivariate linear regression analyses were used to identify significant predictors of ED LOS. In each, potential predictors of interest were eligible for inclusion if they predicted LOS at P<.25 in univariate regression. We refit the resulting models and included predictors of LOS at P<.05 in multivariate regression.
- First analysis conducted with all pediatric visits to assess whether presence of a principal MH Dx predicts LOS, controlling for other significant background characteristics.
- Two additional analyses using only pediatric MH visits identified predictors of LOS for mental health visits.

Methods: Other details

- All analyses conducted with SUDAAN 10 (RTI International, Research Triangle Park, NC) using sample weights and strata provided by NHAMCS to accommodate the complex sampling design
- Estimates based on fewer than 30 visits are considered unreliable and are labeled

Results: Visit # & Population Rate

- 457,000 (95% CI 401-512,000) MH ED visits annually for US youth
- Annual population rate was 5.9 visits per 1,000 US youth (95% CI 5.2-6.6)
- Rate for adolescents aged 14-18 (15.7) higher than for children aged 6-13 (3.4)
- No gender differences, or between whites (5.9) and African Americans (7.1)
- But rates for Hispanics (3.6) were lower than for non-Hispanics (6.2)
- Rate in the Northeast (8.1) was higher than in the West (4.3) or South (5.0), but not the Midwest (7.4)

Results: Proportion of ED Visits

- 1.6% of all pediatric ED visits in US.
- 4.5% of visits for adolescents aged 14-18
- 1.3% of visits by children aged 6-13 years.
- Proportion ranged regionally from 1.1% (95% CI 1.0-1.4) in the South to 2.2% in the Northeast (95% CI 1.8-2.6)

Results: Background Characteristics

Table 1. Background Patient and Hospital Characteristics of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Comparison Statistics			
	Percent	*Percent*	χ^2	df	p	
Age (Years)			138.9	3	<.001	*
0-1 §	1.3	23.9	132.4	1	<.001	**
2-5 §	2.9	23.8	113.7	1	<.001	**
6-13	24.3	28.4	3.3	1	0.07	
14-18	71.6	23.9	121.5	1	<.001	**
Female Gender	49.3	48.1	0.3	1	0.59	
Race			17.5	2	<.001	*
White	78.0	71.4	11.3	1	<.005	**
Black	19.7	24.9	6.7	1	0.01	**
Other	2.4	3.8	6.4	1	0.01	**
Hispanic Ethnicity	11.9	18.5	21.1	1	<.001	*
Primary Payer			5.7	3	0.14	
Public Insurer	37.5	42.4				
Private Insurer	46.0	43.4				
Self Pay	13.2	10.7				
Free Care & Other	3.3	3.5				

Table 1. Background Patient and Hospital Characteristics of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Comparison Statistics			
	Percent	*Percent*	χ^2	df	p	
Mode of Arrival			48.4	2	<.001	*
Ambulance	21.3	6.5	26.1	1	<.001	**
Public Service	12.8	0.9	31.7	1	<.001	**
Walk In	60.8	91.4	46.7	1	<.001	**
Time of Arrival			6.4	2	0.05	*
8:00am - 3:59pm	32.8	35.8	1.7	1	0.20	
4:00pm - 11:59pm	48.3	51.2	1.6	1	0.22	
12:00am - 7:59am	19.0	13.0	6.4	1	0.01	**
Weekend Arrival	25.1	32.0	14.8	1	<.001	*
Summer Arrival	19.9	23.3	1.9	1	0.17	
Immediacy with Which Should be Seen (Triage)			41.1	3	<.001	*
< 15 Minutes	26.2	15.2	7.3	1	<.01	**
15-60 Minutes	45.6	40.6	3.5	1	0.07	
> 1 Hour to 2 Hours	19.6	27.0	11.2	1	<.005	**
> 2 Hours	8.5	17.3	22.8	1	<.001	**

Table 1. Background Patient and Hospital Characteristics of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Comparison Statistics			
	Percent	*Percent*	χ^2	df	p	
Injury, Poisoning, or Adverse Effect			84.5	4	<.001	*
Not Injured	59.2	61.6	0.8	1	0.38	
Intentionally Self Injured	14.2	0.5	50.8	1	<.001	**
Assaulted by Others	1.3	1.3	0.0	1	0.98	
Unintentionally Injured	15.7	31.5	50.9	1	<.001	**
Injured, Unknown Intent	7.7	4.6	15.6	1	<.001	**
Comorbid Mental Disorder	21.1	0.6	70.0	1	<.001	*
Comorbid General Medical Condition	17.5	31.8	46.4	1	<.001	*
Seen in Same ED in Prior 72 Hours §	1.4	2.6	4.5	1	0.04	*

Table 1. Background Patient and Hospital Characteristics of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Comparison Statistics			
	Percent	*Percent*	χ^2	df	p	
Hospital in Metropolitan Area	86.6	83.2	5.1	1	0.03	*
Hospital Region			15.0	3	<.01	*
Northeast	24.3	17.1	7.9	1	0.01	**
Midwest	27.9	24.1	1.2	1	0.27	
South	30.5	42.0	11.3	1	<.005	**
West	17.3	16.8	0.1	1	0.82	
Hospital Ownership			4.4	2	0.12	
Private Non-Profit	75.0	71.8				
Public Non-Federal	17.3	16.9				
Private For-Profit	7.8	11.3				

Results: Treatment Characteristics

Table 2. Treatment Characteristics of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Comparison Statistics			
	Percent	*Percent*	χ^2	df	p	
Seen by MD within Time Recommended at Triage	72.8	81.1	5.5	1	0.02	*
Any Diagnostic Procedure Done	80.6	78.9	0.3	1	0.57	
Laboratory Study Done	68.4	53.5	12.4	1	<.001	*
Imaging Done	28.8	49.4	20.8	1	<.001	*
Screening Medical Examination Done	67.9	64.7	1.5	1	0.23	
Mental Status Examination Done	40.1	7.7	50.2	1	<.001	*
Therapeutic Procedure Done	22.1	39.4	53.4	1	<.001	*
Medication Given	33.6	73.2	57.7	1	<.001	*
Disposition			60.3	3	<.001	*
Discharge without Referral	23.0	42.0	42.7	1	<.001	**
Discharge with Referral	46.5	51.0	2.2	1	0.15	
Admit or Transfer	28.4	6.3	42.5	1	<.001	**
Other	2.1	0.7	5.1	1	0.03	

Results: Length of Stay

- Mean LOS for MH visits (239.1 min) significantly exceeded that for non-MH visits (147.9 min) by 61.7% (91.2 min)
- Median LOS for MH visits (161.6 min) was 52.6% significantly longer than for non-MH visits (105.9 min)
- Similarly, the 25th and 75th percentile LOS for MH visits exceeded those for other visits by 55.9% and 47.9%, respectively.
- The observed difference in mean LOS between MH and other visits remained significant after adjusting for differences in patient and hospital characteristics.

Table 3. Mean Length of Stay, in Minutes, of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, by Selected Characteristics, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Difference (95% CI) Unadjusted	Adjusted
All Visits	239.1	147.9	91.2 (52.2 - 130.2) *	37.2 (8.6 - 65.8) *
Background Characteristic				
Age (Years)				
0-5	163.8	146.3	17.5 (-31.3 - 66.2)	39.7 (-43.0 - 122.3)
6-13	239.5	143.1	96.4 (57.2 - 135.7) *	41.7 (6.4 - 77.1) *
14-18	242.9	156.6	86.3 (37.8 - 134.7) *	32.7 (-6.8 - 72.1)
Race				
White	241.6	144.9	96.7 (52.4 - 141.1) *	41.5 (10.7 - 72.2) *
Black	220.3	156.0	64.3 (30.8 - 97.8) *	33.7 (-6.1 - 73.6)
Ethnicity				
Hispanic	251.5	175.5	76.0 (10.2 - 141.8) *	-21.5 (-59.2 - 16.2)
Not Hispanic	237.3	142.5	94.8 (53.6 - 136.0) *	44.0 (13.1 - 75.0) *
Primary Payer				
Public Insurer	224.2	145.2	79.0 (42.2 - 115.8) *	45.8 (7.9 - 83.6) *
Private Insurer	259.9	146.7	113.3 (62.8 - 163.7) *	50.8 (12.1 - 89.4) *
Self Pay	206.6	157.7	48.9 (-0.2 - 98.1)	-35.3 (-74.0 - 3.4)
Mode of Arrival				
Ambulance	245.7	192.4	53.4 (6.1 - 100.7) *	-4.2 (-51.3 - 42.8)
Public Service	272.1	198.9	73.2 (-60.9 - 207.2)	-60.9 (-159.2 - 37.3)
Walk In	228.4	143.2	85.2 (35.8 - 134.6) *	54.3 (22.6 - 86.1) *

Table 3. Mean Length of Stay, in Minutes, of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, by Selected Characteristics, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Difference (95% CI) Unadjusted	Adjusted
Immediacy with Which Should be Seen (Triage)				
< 15 Minutes	230.4	156.7	73.7 (13.9 - 133.6) *	37.0 (-38.2 - 112.2)
15-60 Minutes	225.9	152.4	73.5 (42.6 - 104.4) *	33.1 (-7.6 - 73.7)
> 1 Hour to 2 Hours	227.7	145.6	82.1 (47.8 - 116.4) *	47.8 (14.9 - 80.8) *
> 2 Hours	180.3	131.0	49.3 (18.6 - 80.0) *	23.9 (-9.9 - 57.7)
Injury, Poisoning, or Adverse Effect				
Not Injured	227.8	155.9	71.9 (38.2 - 105.7) *	17.4 (-10.6 - 45.4)
Intentionally Self Injured	302.0	220.3	81.7 (-5.5 - 168.9)	24.9 (-26.6 - 76.4)
Assaulted by Others	217.3	170.8	46.5 (-48.0 - 141.1)	58.4 (-41.7 - 158.6)
Injured, Unknown Intent	225.2	133.1	92.2 (30.4 - 153.9) *	42.1 (-1.1 - 85.3)
Unintentionally Injured	234.8	132.7	102.2 (26.9 - 177.4) *	103.5 (-3.8 - 210.8)
Comorbid General Medical Condition				
Present	247.8	164.5	83.4 (-0.7 - 167.4)	19.5 (-28.8 - 67.8)
Absent	237.2	140.0	97.2 (64.4 - 130.1) *	41.3 (9.6 - 72.9) *
Hospital in Metropolitan Area				
Metropolitan	248.0	156.3	91.7 (47.2 - 136.2) *	25.1 (0.2 - 49.9) *
Non-metropolitan	183.9	107.3	76.6 (21.3 - 131.9) *	114.7 (27.2 - 202.2) *
Hospital Region				
Northeast	284.0	157.2	126.9 (80.0 - 173.7) *	89.1 (34.2 - 144.0) *
Midwest	169.8	135.2	34.5 (4.2 - 64.9) *	0.5 (-57.9 - 58.8)
South	283.4	147.3	136.1 (34.5 - 237.6) *	49.1 (5.6 - 92.6) *
West	204.3	158.7	45.6 (20.6 - 70.6) *	5.9 (-31.0 - 42.9)

Table 3. Mean Length of Stay, in Minutes, of Pediatric Mental Health and Non-Mental Health Emergency Department Visits in US Hospitals, by Selected Charactertistics, 2001-2006

Characteristic	Mental Health Visits†	Non-Mental Health Visits‡	Difference (95% CI) Unadjusted	Adjusted
Treatment Characteristic				
Seen by MD within Time Recommended at Triage	197.6	135.4	62.2 (35.8 - 88.6) *	40.1 (7.4 - 72.9) *
Not Seen in Time Recomm	267.2	229.2	38.0 (-5.4 - 81.5)	3.8 (-53.1 - 60.7)
Laboratory Study Done	310.7	217.3	93.4 (24.3 - 162.6) *	43.8 (2.8 - 84.7) *
Not Done	150.0	114.5	35.5 (-1.8 - 72.8)	14.3 (-19.1 - 47.6)
Imaging Done	237.1	193.5	43.6 (10.5 - 76.7) *	-2.0 (-39.7 - 35.8)
Not Done	168.6	123.2	45.3 (7.6 - 83.1) *	22.7 (-16.9 - 62.3)
Therapeutic Procedure Done	244.5	170.3	74.3 (41.1 - 107.4) *	25.1 (-12.0 - 62.2)
Not Done	238.8	132.6	106.2 (57.6 - 154.8) *	56.7 (23.2 - 90.1) *
Medication Given	292.0	151.3	140.7 (29.6 - 251.8) *	68.8 (16.7 - 120.8) *
Not Given	212.5	137.7	74.7 (53.6 - 95.9) *	27.7 (-1.4 - 56.8)
Disposition				
Discharge without Referral	203.1	137.6	65.5 (25.8 - 105.2) *	47.4 (-19.1 - 114.0)
Discharge with Referral	197.5	141.0	56.5 (35.8 - 77.3) *	34.9 (6.1 - 63.8) *
Admit or Transfer	305.3	305.2	0.1 (-61.1 - 61.3)	-23.6 (-98.5 - 51.4)

Results: Predictors of MH LOS

- MH Dx did not predict LOS

Characteristic	Percent	Median LOS in Minutes†	(95% CI)
Mental Disorder Diagnosis			
Psychotic	5.9	136.1	(80.7 - 150.3)
Bipolar	4.3	161.8	(95.3 - 240.2)
Depressive	22.4	175.9	(142.6 - 216.3)
Anxiety	21.8	160.7	(144.0 - 186.3)
Behavioral	17.3	140.1	(111.7 - 189.8)
Substance	19.7	158.0	(131.9 - 200.1)
Adjustment	2.8	155.3	(115.5 - 558.5)
Other	5.9	118.8	(75.8 - 152.6)

Table 4. Significant Predictors of Length of Stay of Pediatric Mental Health Emergency Department Visits† in US Hospitals, 2001-2006

Predictor	Percent of Visits	Increase in Length of Stay, in Minutes Unadjusted Median	Unadjusted Mean	Adjusted Mean	Adjusted (95% CI)	Overall Predictor Statistics F	df	p
Backround Characteristic								
Hospital Region						6.8	3	<.001
Northeast	24.3	59.1	114.2	104.0	(52.7 - 155.3) *			
South	30.5	27.4	113.6	127.5	(12.2 - 242.9) *			
West	17.3	25.6	34.5	30.7	(-9.0 - 70.4)			
Midwest‡	27.9	(135.8)	(169.8)	(169.8)				
Primary Payer						5.3	2	0.01
Private Insurer	46.0	22.5	35.7	64.11	(3.3 - 124.9) *			
Self Pay, Free Care & Other	16.5	39.9	48.5	6.63	(-51.3 - 64.5)			
Public Insurer‡	37.5	(154.6)	(224.2)	(224.2)				
Day of Arrival						6.9	1	0.01
Weekday	74.9	20.3	40.3	43.67	(10.3 - 77.0) *			
Weekend‡	25.1	(145.0)	(208.9)	(208.9)				
Comorbid Mental Disorder						5.6	1	0.02
Present	21.1	29.9	81.1	83.2	(12.9 - 114.1) *			
Absent‡	79.0	(154.3)	(237.2)	(237.2)				

Table 4. Significant Predictors of Length of Stay of Pediatric Mental Health Emergency Department Visits† in US Hospitals, 2001-2006

Predictor	Percent of Visits	Increase in Length of Stay, in Minutes Unadjusted Median	Unadjusted Mean	Adjusted Mean	Adjusted (95% CI)	Overall Predictor Statistics F	df	p
Treatment Characteristic								
Laboratory Study						27.2	1	<.001
Done	68.4	79.4	160.7	128.3	(79.0 - 177.6) *			
Not Done‡	31.6	(124.3)	(150.0)	(150.0)				
Disposition						4.0	3	0.01
Admit or Transfer	28.4	49.1	102.3	97.6	(28.8 - 166.3) *			
Discharge without Referral	23.0	-15.1	5.5	55.6	(-18.9 - 130.0)			
Discharge with Referral‡	46.5	(154.3)	(198.5)	(198.5)				

Discussion: Overview

- Pediatric MH visits present a difficult challenge for US EDs
- MH visits are longer, more acute, and more likely lead to admission.
- Differences vary by patient age, ethnicity, insurance status, day of visit, and hospital location
- At a time when ED overcrowding is a major public health concern, youth with mental disorders experience prolonged waits for assessment and disposition
- After a decade of marked constriction in use of inpatient MH care and persisting concerns over access to outpatient treatment, ED providers face the sometimes challenging task of finding inpatient beds for more than 1/4 of youth who present with mental disorders

Discussion: Implications of LOS

- MH visits were 90 minutes longer than non-MH visits
- Difference is likely to impart meaningful clinical risks and administrative costs.
- After a 39 minute reduction in LOS, one study reported a decrease of greater than 50% in patients who left without being seen.
- Aggressive, suicidal and homicidal youth often require monitoring by security personnel, and cost increases with visit duration.
- Increased LOS also contributes to ED overcrowding and may increase ambulance diversion

Discussion: Prior LOS Findings

- Our national mean LOS for pediatric MH visits, approximately 4 hours, is considerably shorter than averages reported from individual EDs.
- Other reports were from facilities in urban locations that tend to have longer LOS than their rural counterparts and from geographic regions associated with especially long LOS.

Discussion: Regional Variation

- Reasons for marked regional variation in LOS are unclear
- Inability to move admitted patients from the ED to an inpatient bed is the reason most frequently cited for ED crowding in provider surveys
- Regional variation in the proportion of EDs able to directly admit mentally ill youth may contribute. One nationally representative survey conducted 2002-3 found regional variations in pediatric inpatient services accessible from EDs that mirror the ED LOS findings. The proportion of EDs in hospitals that did not admit children was highest in the Northeast (16.8%) and South (12.0%), where the ED LOS is longest, followed by the West (10.3%), and Midwest (3.7%), where the adjusted mean ED LOS for pediatric mental health visits are progressively shorter.
- In some settings, youth routinely admitted to medical unit prior to transfer to specialty MH. The relationship between ED visit duration and access to specialized inpatient services deserves further study.

Discussion: Private Insurance

- Discrepancy between MH and non-MH ED LOS was especially evident for privately insured youth
- The clinical basis for this pattern is not known, although one provider survey in a pediatric ED identified “insurance issues” as an obstacle to timely arrangement of follow up services for mentally ill youth
- Behavioral health managed care utilization practices, which aim to minimize use of expensive, high-intensity services and which are especially prevalent in private insurance programs contribute to extending LOS in hopes of reducing use of costly inpatient services.

Discussion: Severity

- Medication administration and comorbid mental disorder diagnosis were each associated with increased LOS for pediatric ED MH visits
- Both factors may be markers of illness severity
- Medication use may be prompted by behavioral agitation and typically requires extended observation to monitor behavioral safety and medication effects.
- Psychiatric comorbidity in youth associated with increased functional impairment and use of MH services in comparison to youth with one mental disorder

Discussion: Struck Kids?

- Surprisingly, little evidence in our data for subgroup of “stuck kids” with extended LOS awaiting placement
- Differences between 75th percentiles for MH and non-MH visits smaller than between 50th (median) or 25th percentiles
- Among admitted youth, LOS didn’t differ overall between MH and non-MH visits

Discussion: Reform

- Findings suggest areas for administrative and clinical reform
- Emergency MH teams may substantially shorten LOS, and because reimbursement does not fall with LOS, may prove cost-effective.
- In a majority of community hospital EDs, where pediatric MH volume is small, full-time specialized ED services unlikely to be cost effective
- In these facilities, assessment and disposition of youth is conducted by ED clinicians with little or no training in pediatric emergency MH assessment or awaits the arrival of a consultant
- Innovations such as regional telepsychiatry may reduce LOS in the ED and triage with rapid referral may avert ED use.
- Short-term admission to non-psych beds with psychiatric consultation may reduce ED overcrowding
- Reforms should aim to preserve core ED function of ensuring safety of seriously ill youth while shifting treatment initiation to more specialized settings.

Discussion: Limitations

- Community MH diagnosis is unreliable. Psychiatric diagnosis remains a particular challenge in young people, with data supporting both the over- and under-diagnosis of youth mental disorders in routine clinical settings.
- Little information was available concerning prior or subsequent treatment patterns for ED visits.
- Possible effects of LOS on subsequent treatment and outcome could not be identified.
- Treatment charges and costs were unavailable.
- ED-level data were not available, precluding study of how ED characteristics, such as high or low rates of pediatric mental health visits, affect LOS.

Discussion: Future Questions

- Most fundamentally, what are the relative contributions of clinical and administrative factors to ED LOS?
- Adult research suggests psychiatrists determine disposition in < 15 min and ED physicians document disposition within 30 min of start of psychiatric examination.
- Yet little data are available on the structure of pediatric ED assessments
- How much is devoted to clinical processes: building an alliance, gathering information from families and schools, integrating ambiguous, fluctuant, or conflicting symptoms and exam findings, and providing psychoeducation and brief supportive treatment?
- How much time allocated to administrative challenges: waiting for specialist evals, callbacks from benefit managers, and bed openings in distant inpatient units?
- Emergency provider surveys and detailed description of ED activities and decision making could inform these questions

Discussion: Future Questions

- What is role of local inpatient and outpatient MH service availability on ED LOS?
- What is effect of extended ED LOS on health outcomes for mentally ill youth?
- Examining qualitative or subjective experiences of youth and families during ED visits, as well their subsequent treatment course and service use, would enhance understanding of whether hastening ED visits yields improved outcomes.

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Thank you for your attention!

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