Pediatric Emergency Psychiatry

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Pediatric Behavioral Emergencies

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Objectives

- Evaluation of children and adolescents with psychiatric issues
- Discussion of common psychiatric problems that bring children
- Determination of need for admission

Pediatric Demographics

1.6% of all ED pts in this age group
- Non-white, teenage, female, live in NE or MW
- Diagnoses
  - Substance use disorder 24.2%
  - Anxiety disorder 16.6%
  - Attention deficit and disruptive 11.3%
  - Psychosis 10.8%
- Meds given in 47.1%
- Admitted 19.4%

American Academy of Pediatrics and American College of Emergency Physicians support for increased mental health resources including improved pediatric mental health tools
Psych ED Visits In France

- From 2001-2006, 335 episodes for 264 kids
- 2% of all ED visits, 62% female, avg age 16.5 years
- Disorders
  - Neurotic
  - Stress related
  - Somatoform
- Repeat ED visits
  - SUD
  - Schizophrenia
  - Personality disorders

Occult Psychiatric Illness

- Undiagnosed Mental Illness 40.3%
  - Number of diagnoses
    | 0 | 77 | 59.7%
    | 1 | 20 | 15.5%
    | 2 | 8  | 6.2%
    | 3 or > | 24 | 18.6%
- Most frequent diagnoses
  - Oppositional Defiant: 13.2%
  - ADHD: 8.5%
  - Conduct Disorder: 8.5%
  - Separation: 7.0%
  - Dysthymia: 7.0%
  - Suicide: 6.2%
  - Depression: 6.2%

Medical Clearance Purpose

- Primary Purpose - To determine whether a medical illness is causing or exacerbating the psychiatric condition.
- Secondary Purpose - To identify medical or surgical conditions incidental to the psychiatric problem that may need treatment.
Primary Purpose
Etiology

- Drug and alcohol intoxication or withdrawal
- Medical
  - Hypoglycemia
  - Hyperthyroidism
  - Delirium
  - Head Trauma
  - Temporal Lobe Epilepsy
- Psychiatric

What part of the evaluation is useful?

- Retrospective, observation study of psychiatric patients over 2 month period
- 352 patients with 19% having medical problems
- Sensitivity
  - History 94%
  - Physical exam 51%
  - Vital signs 17%
  - Laboratory testing 20%

Medical Clearance of the Pediatric Psychiatric Patient

- 210 patients had medical evaluation
- 3 not medically cleared - toxic acetaminophen, undiagnosed old fracture, abd pain + preg
- 26% had medically indicated testing
  - 44% had abnormal results
  - Sub-therapeutic drug levels 10
  - Abnormal CBC 5
- Routine urine drug screens not useful
Assessment of Children and Adolescents in ED

**Interview**

- Flexible order of interview
- Multiple sources of information
- Use open ended questions
- Avoid starting with upsetting and challenging questions
- Ask about their interests
- Offer food/drinks
- Key points: assess for safety, impaired thoughts, hallucinations
- Look for evidence of abuse, neglect, intoxication

**Assessment - continued**

- Provide structure - orient to ED environment
- Buffer unexpected changes to reduce frustration
- Maintain positive tone to interactions
  - Speak with soft voice
  - Validate feelings
  - Offer distraction
  - Find something in child's story to agree with

**Presentation**

**Attention Deficit & Disruptive Disorders**
- Brought to ED by school officials, police, parents
- Due to aggressive behavior
  - Kicking
  - Punching
  - Making threats
Attention Deficit Hyperactivity Disorder

- **Symptoms**
  - Inattention over activity, impulsivity
  - "Driven" cannot sit still

- **Incidence**
  - Seen in 5-12% of pediatric patients
  - More common in boys
  - Associated with oppositional defiant syndrome and conduct disorder

- **Treatment**
  - Psychostimulants and one non-psychostimulant (Atomoxetine)

ODD and CD Presentations

- **Oppositional Defiant Disorder (ODD)** - arguing, losing temper, deliberate annoyance
- **Conduct Disorder (CD)** - violation of rights, aggression, lies, theft, truancy, runaway, stealing, property destruction

  - Proactive aggression - deliberate with identifiable external goal (conduct d/o)
  - Reactive aggression - emotional dysregulation (girls at higher suicide risk if depressed)

Oppositional Defiant and Conduct Disorders

- Oppositional Defiant - Problems with authority figures, provocative behaviors, negativity
- Conduct - persistently violates the rights of others or social rules and norms
- Incidence - 5% 2-3X in boys
- May lead to antisocial personality disorder
Management

- Utilize verbal/behavioral interventions:
  - aim to calm, establish basic expectations and reduce environmental stimulation.
- ODD and Conduct d/o
  - Can present violent/aggressive – may need restraints, medications
  - Must r/o depression/substance use (comorbidity can be deadly)
- Treatment – Parent Management Training, Multisystematic Therapy, meds

Autism

- Problems with
  - Social interaction
  - Communication
  - Play
  - Unusual restricted and repetitive interests
- Onset before age 3
- Spectrum of disorders
- Male predominance

Autism Treatment

- Assess safety, defuse situation
- Assess for medication SE, other substances
- Redirect families to outpatient tx
- Importance of behavioral and educational interventions
- Risperidone used for treatment of agitation
**Self-Injury**
- Purposefully harming oneself with or without suicide intent
- Self-biting, scratching, burning, cutting, poisoning, jumping
- Prevalence from 6-41%
- Hopeless and lowered self-esteem
- Associated with suicide in 5%?
- Tx-various therapies, admission, meds

**Suicidality**
- 3rd leading cause of death - age 15-19
- 2nd leading cause of death - Native American Alaskan Native youth
- Men are nearly 4 times more likely to die by suicide than women.
- Women attempt suicide 3 times as often as men.
- Age 15-19 firearms most common method (45%) followed by suffocation/hanging (42%).
- Poisoning/overdose accounts for 5%
- Suicide attempts more females

**Suicide Identification**
- Overt
- Suspected
  - Any overdose
  - Accidental gunshot wound
  - Wrist laceration
  - Automobile crash
  - Fall from height
- Unsuspected
- Completed
### Always ask

- If the intent was to harm or kill oneself
  - "Sometime kids just don’t want to be alive - do you feel that way sometime?"
  - “In the past week, including today, have you felt like life is not worth living?”
  - “In the past week, including today, have you wanted to kill yourself?”
- Follow-up questions for SI:
  - “Have you ever tried to kill yourself?”
  - “In the past week, including today, have you made plans to kill yourself?”

### Substance Use Disorder and Mental Health

- SUD 2.1% and Mental health 4.3%
- Dual diagnosis 20.9% of those, higher admission/transfer rates
- Factors associated with SUD
  - Male
  - Urban location, West region
  - Ambulance
  - Night and weekend shifts
- LOS
  - 89 min for mental health
  - 71 min for SUD
  - 140 min for dual

### Adolescent Dual Diagnosis in PES

- 4016 discharges in Spain
- 26% of all psych patients seen
- Compared to psych group, dual diagnoses have:
  - Conduct disorders
  - Social problems
  - Involuntary
  - Less hospital admission
  - Less connection to healthcare
  - Higher rate of ED use
- Recommend
  - Detection
  - Brief treatment
  - Referral
**Substance Abuse**
- Most common diagnostic category (28%)
- Alcohol most common
- Marijuana most common illicit substance
- Commonly comorbid
- Boys - illicit drugs; Girls - more ecstasy
- Prescription drug use on the rise
- OTC medications - dextromethorphan
- Risk for pregnancy, incarceration, suicide

**Management**
- Discuss the negative consequences
- Chemical dependency counselor
- Motivational interviewing
- Outpatient CD programs

**Anxiety Disorders**
- Anxiety-related visits increased in recent years
- More often - physical symptoms of panic attacks
- Less often - catastrophic thinking and avoidance
- Most common symptoms - palpitations, nausea, trembling, and shortness of breath
- Adolescents - more likely to complain of cognitive symptoms - “fear of losing control”
Anxiety Disorder

- Separation Anxiety Disorder
  - Normative behavior becomes excessive and developmentally inappropriate

- Social Anxiety Disorder
  - Fear of unfamiliar persons

- Generalized Anxiety Disorder
  - Excessive and uncontrolled worry with impaired function

  **ED Management** - benzodiazepine, diphenhydramine ?, hydroxyzine ? OP I/u

Obsessive Compulsive Disorder

- Undesired thoughts, impulses, worries, memories, words, images
- Checking, ordering, washing, hoarding
- Some areas of life unaffected
- Affects 1%, males and females equal

- Treatment - Cognitive Behavioral Therapy and/or SSRIs

Depression

- Depression - similar to adult presentations
  - Young child may demonstrate irritability or sadness
  - 29% of all adolescence had depression
  - Early onset - significant disability and psychological distress
  - Depression + psychotic features more likely represent a bipolar form of depression
Depression

- Management
  - Two-question screen
    1) “During the past month, have you often been bothered by feeling down, depressed, hopeless?”
    2) “During the past month, have you often been bothered by little interest or pleasure in doing things?”
  - Assess for suicidality and anxiety
  - Outpatient f/u or Crisis Response Team
  - Outpatient Treatment - cognitive behavioral therapy, interpersonal therapy and SSRIs

Bipolar Disorder

- Can be challenging to distinguish from ADHD can be comorbid
- Management
  - Safety, reduce environmental stimulation
  - Evaluate for substance abuse
  - Initiate an atypical antipsychotic
  - Intensive outpatient tx vs. hospitalization
- More responsive to atypical antipsychotic than to lithium and mood stabilizers

Childhood Schizophrenia

- May occur after age 5
- Similar to that seen in adults
- Acute, gradual or combination
- Auditory hallucinations
- Delusions less bizarre than adults
- Schizophrenia and bipolar disorder can occur with an earlier onset
- Disorganization in thinking may be subtle
- Thought “blocking,” train of thoughts, “derailed” bizarre thoughts
- Hallucinations may arise from toxidromes
Psychotic Disorders

- Management
  - Always explore for the presence of suicidal and homicidal ideation in the psychotic child or teen
  - May need to be hospitalized
  - May initiate antipsychotic if OP f/u is possible
  - Outpatient Treatment with antipsychotics
    - Only Clozapine and Haloperidol studied

Eating Disorders

- Anorexia Nervosa
  - Refusal to maintain weight
  - Intense fear of becoming fat
  - Disturbance of body image

- Bulimia Nervosa
  - Binge eating
  - Behaviors to prevent weight gain
  - Preoccupation with weight

Eating Disorders

- Cardiac – arrhythmias, arrest, Q-T prolongation
- GI – constipation, ileus
- GYN - amenorrhea
- Metabolic - glucose intolerance, hypokalemia
- Neuro/ortho– paralysis, neuropathy, weakness
- Renal – polyuria, polydipsia
**Use of Restraints**


- **EM residents vs. Peds EM fellows**
  - Use <5% of ped psych patients
  - 40 of 47 EM and 29/32 of Peds had policies on restraint use
  - No training on application or appropriate situation of restraints in either group

- **Treatment**
  - Therapeutic holding rarely used, younger kids
  - 72% of EM and 85% Peds use “chemical restraints”
    - Benzos and Butyrophenones used

**Inappropriate Peds Psych Visits**


- 1062 visits to ped psych ED
  - 28.7% were admitted
  - Analysis of appropriateness of ED visit
    - 39% fully appropriate
    - 26.6% somewhat appropriate
    - 34.4% inappropriate – better functioning, low harm potential, severity of complaints, absent psychosis
      - Referral from school or mental health provider
      - Unavailable appointment

  - Recommend improved access to urgent psych visits and educational programs

**Length of Stay**


- 939 patients
- Avg age 14.1 yrs.
- Median LOS 295 min
- Longer LOS assoc with psychotic disorder or suicidal ideation or attempt
- Longer LOS assoc patient sex, previous history of self harm, daily census
Psych Admissions


- Predictors of pediatric psych admissions
- Bipolar and depression
- Minorities predictor of not being admitted, older and anxiety disorder

Ped Psych Boarding


34.1% boarded

Longer boarding time for autism, mental retardation, developmental delay, presenting on the weekend, months without school vacation.

Suicide ideation predicted linger boarding times

Age, race, insurance status and homicidal ideation did not predict boarding

Ped Psych Boarding

Wharff, EA. Et al: Predictors of psychiatric boarding in the pediatric emergency department: implications for emergency care. Ped Emerg Care 2011

- 461 admissions
- 34.1% boarded
- Mean 22.7 hours mean
- Increased boarding assoc with
  - Diagnosis of autism, mental retardation or developmental delay
  - Presenting during weekend
  - During school vacation
  - Severe SI
  - Age, race, insurance status and homicidal not associated
**Impact of Ped Psych Services**


- Before and after board certified psychiatrists and social workers
- Mean age increased before and after
- More likely to be discharged to psych hospital 18% vs 9%
- ED LOS decreased by 2.5 hrs.
- Costs decreased slightly $14.

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**Rapid Response Program**


- Evaluation of child and adolescent rapid emergency stabilization program
- Before and after study
- LOS before 19.7 hrs. to 10.8 hrs.
- Avg charge per patient decreased by $905
- Avg total cost decreased by $569

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**Impact of Boarding on a Medical Floor**


- 555 of 1108 patients on involuntary holds got admitted to peds medical unit
- 94% because of no psych bed
- 6.1% counseling documented
- 20.1% received psychiatric meds
- Cost $4269 per patient
Referral from ED to Peds Psych Clinic Referrals

- Referred from Psych ED for kids to Peds psych clinic over one year
- Male
- Mean age 12.2 yrs.
- Disorders
  - Adjustment disorder
  - Mood disorder
  - Anxiety disorder
- 5% hospitalized

Parents Response

- Assessment of caregiver burden using the caregiver strain survey
- High level of subjective caregiver strain
- Associated with disruptive behavior, substance use, aggression and discharge to police
- Lower child functioning, adopted child, inappropriate use of ED, defiance, lack of prior psych ER visit

Take Home Points

- Anticipate an extended assessment using collateral information and other personnel
- Determine need for admission and suicide risk
- Ask about suicide ideation and access to lethal means such as firearms
- Involve mental health in the assessment
- Major depression in pediatric patients may present as an irritable mood
- Drug use is highly prevalent among teenagers