The Impact of Chronic Medical Illness on Behavior and Learning in Children and Adolescents

Kristina Sowar, MD
5/13/2014
CRCBH Telehealth Behavioral Series
Objectives

Appreciate the complex relationship between childhood chronic illness and behavioral/psychological concerns

Consider the challenges posed by two particular illnesses, asthma and diabetes

Understand means of prevention and intervention for psychological/behavioral concerns in this population, in multiple settings
Chronic medical illness

“A disorder with a protracted course that can be fatal, or associated with a relatively normal life span, despite impaired physical or mental functioning”

Treatable yet not curable

Affects ~20 % of school age population (nearly 12 million children)
Common Chronic Medical Illnesses in Children

Asthma
Insulin Dependent Diabetes Mellitus (IDDM)
Juvenile RA
Sickle Cell
Hemophilia

Cystic Fibrosis
Cancer
HIV
Epilepsy
What are risk factors in illness management/coping?

Degree of functional impairment
Brain involvement
  Structural/autoimmune processes
Nature of illness
  Course, lethality, life span
Type of medical procedures and hospital/non-hospital experiences
  Intensive outpatient vs chronic outpatient
Psychological risk factors related to illness

Interference with non-illness related aspects of life
  School absences, friendships
Family functioning
  Pre-existing and coping
  Cohesion, flexibility, clear/open communication
Individual characteristics and internal resources
  Pre-existing psychological history and illness
Psychological risk factors related to illness

Demographic variables
- Sex (boys > girls)
- Age
- Social class

External Resources and Support Systems
Incidence/cause of psychosocial adjustment problems

Affects ~ 9-37% vs 5-15% general population
  Difficulty in accurately assessing data

Can be tricky to discern between organic psychological issues and manifestations of illness (and interrelationships between)
Common Psychological Problems

- Internalizing (anxiety, depression)
- Externalizing (aggression, noncompliance)
- Somatic (pain, impaired functioning)
- Self-concept (poor self-image, low self-esteem)
Common School Issues

School avoidance (cycles of absenteeism, anxiety, physical discomfort)

Acting out (generalized frustration)

Leaning issues or drop in grades
  associated with pain, sleep, cognitive issues
  From illness, meds, treatment
Post-Traumatic Stress Disorder

Can occur from medical procedures/experience (acute/chronic)

Can explain reactions/avoidance children (and adults) have about medical experiences
Illness through development

Infant/toddler: developing trust/security challenged by pain, restriction of motion, separation. Parents can help by being present, holding, soothing as possible.

Preschool: developing independence often don’t understand cause/effect. May counter lack of control by challenging limits. Be firm, offer choices in flexible aspects.
Early School Age

- Developing sense of mastery over environment
- May employ magical thinking (e.g., illness from bad thoughts, hitting brother)
- Allow children to help with illness, reassure it is not their fault
Through the Lifespan

Older School Age

More capable of understanding illness/tx
Often feel left out when missing activities
Parents can help child participate in school

Adolescence

Developing separate identity, self-image
Periods of denial, complications re: growth
Help teen gain control of their disease
Management and Intervention

Many variables to consider
Target source and feelings
Medical (remedy medical problem -> improve other concerns)
Coping skills, CBT, targeted therapy
Grief processing
Asthma: case presentation

• 9 yo male; ddx with chronic asthma; presenting to ER for “asthma attack”
• Several prior admissions for asthma exacerbations
• Strong family hx of asthma
• Currently on 2 forms of inhalers
• 3rd grade, enjoys sports
Case presentation

• Concerns: pt is also very anxious and becomes worried/scared when it feels “hard to breathe”
• This episode started when yelled at in a soccer game
• Mother with hx of anxiety
• Fighting amongst parents when his asthma worsens about care/triggers
Asthma

One of most common chronic childhood disorders; affects 7.1 million (4.1 million with asthma attack in one year)

3rd leading cause of hospitalization in children under 15

About 774,000 emergency room visits due to asthma in children under 15

One of leading causes of school absenteeism
What do we consider with a child with asthma?

Psychological issues
  Fear/anxiety, PTSD
  Depression
  Sleep disturbances

Can be difficult to determine psychological vs physical (symptom and trigger overlap)
Stress, medications, compliance
Asthma and Mental Health Triggers

Stress: increases constriction of smooth muscle – increased reactivity
  Worries, family, school
Medications
  Albuterol (B receptor agonists) can cause feelings of anxiety
  Steroids: affect mood, sleep, anxiety
Asthma and Mental Health

• Higher rates of anxiety disorder diagnosis, including separation anxiety
• 25 x higher incidence of short stature, skeletal retardation and delayed puberty

Anxiety increased severity of asthma, health service use and functional impairment

Mothers of patients with asthma: higher rates of anxiety/OCD
Asthma Interventions

- Adequate care
- Medication compliance
- Accommodations as needed
- Family Support
- Stress/anxiety management techniques
- Mindfulness of anxiety and psychosocial triggers in treatment
Case presentation: Diabetes

- 14 yo Hispanic female; referred to School Health clinic because of concerns of recent DKA hospitalization and poor grades
- Hx of multiple hospitalizations for DKA in past several years
- Diagnosed with T1DM at 7
- Blood sugars range from 50-500
Case presentation

Patient lives with mother and siblings; frequent conflict at home
Reports when very upset with mom, will sometimes intentionally inject too much insulin
Intermittent compliance with diet and treatment; doesn’t like to follow when with friends
Case presentation

• Patient at times binges and then too little insulin
• No other medical issues
• Has stopped attending class regularly, had many absences with hospitalizations/appointments
Diabetes factoids

• 1 in 400 children under 18 has Diabetes; rates increasing
• Type 1 vs 2
• Bimodal onset (4-6 yrs and adolescence)
• Prone to other autoimmune conditions
• Young children struggle more with hypoglycemia and associated symptoms
• Older with pubertal changes (insulin resistance, difficulty with care)
Mental Health and Diabetes in Children/Teens?

Hypo-hyperglycemia
Depression
Suicidal ideation
Self harm
Eating disorders
Cognitive challenges
Long term sequelae
How do psychological issues with diabetes manifest?

- Lack of compliance with care
- Isolation/withdrawal
- School avoidance
- Eating disordered behavior
- Aggression and defiance
- Cognitive slowing
Psychological manifestations of Blood Sugar Changes

Hypoglycemia
   Acute: confusion, poor concentration, seizures
   Chronic: lower IQ, decreased spatial intelligence, delayed recall

Hyperglycemia
   Acute: externalizing behavior
   Chronic: decreased verbal intelligence, decreased brain volume
Diabetes and Mental Health

Diagnosis: can be a shocking experience

About 30% of newly diagnosed children experience an adjustment disorder

Prevalence of Psych Disorders in children with diabetes: about 2-3x higher than general population

Increased substance use as well
Depression and Mental Health

Suicide/suicidal ideation: 10 fold increase for adolescents with T1DM
  Coupled with ready access to lethal means (insulin)

Eating disorders: more common (decrease insulin to lose weight, or counterbalance binging)
  This increases HgA1c – increased other risks
Diabetes and Family Functioning

22% of mothers with children with T1DM report clinically significant depression
Factors that influence poor metabolic control:
- High family conflict
- Low family cohesion
- Psychiatric illness, premorbid disruptive behaviors
Mental Health and Diabetes Care

Assessment / understanding

Medications: some may worsen symptoms or block (B blockers, sleep meds with hypoglycemia)

Treatments:
  - Meds
  - Behavioral therapy, coping skills training
  - MI
So now ...
How do we help kids stay or become more healthy? And cope with their illnesses?
Chronic Illness Considerations

- Diagnosis
- Impairment
  - Support systems, Stressors
- Medications / Side Effects
- Psychiatric Co-Morbidities
- Developmental stage
- Meaning of School
Goals of Targeted Intervention

Mastery of anxiety and fears related to the illness and its management
Developmentally appropriate understanding of the illness (age chronological)
Compliance with treatment regimens
Integration of the illness into family life
Successful adaption to the important systems (hospital, school, peers)
Cognitive-behavioral strategies

• Help identify stress, change perceptions, teach new behaviors
• Explore link between thoughts and actions
• Train in more helpful ways of thinking about problems
• Behavioral components: breathing, systematic desensitization, rehearsal, hypnosis, play
Positive Psychotherapeutic Interventions

Character Strengths
Gratitude
Hope / Optimism
Meaning
Teaching Others
Other interventions

Social skills training

Remediation and rehabilitation

Family therapy and group work
School integration/re-entry

Multifaceted in assisting child, staff, classmates
IEP or other behavioral plans
Consider modifications (shortened day, food)
How and what information to share?
  How it will be shared with whom?
Conclusions

Many children are affected by Chronic Medical Illness.

There are multiple factors to consider in assessing a child’s resiliency/coping capacity.

Children can benefit from targeted individual, family, and school interventions.

Psychological issues and medical illnesses can often overlap in presentation.
For Future Direction

Many children in families with chronic illness (parents, siblings) are also affected.

Treating chronic illness is often best done within a system, so consideration of how to improve larger systems can be of use, too.
References

Children with a chronic illness: the interface of medicine and mental health. NYU Child Study Center Letter; volume 5 number 4, March/April 2001. New York NY


Psychiatric Issues in Children and Adolescents with Diabetes. Psychiatric Times, Oct 6 2011, accessible online

Children and Chronic Illness Handout: University of Michigan. [http://www.med.umich.edu/yourchild/topics/chronic.htm](http://www.med.umich.edu/yourchild/topics/chronic.htm)