Essential Issues in Pediatric Psychosomatic Medicine

May 01, 2006 | ADHD [1], Bipolar Disorder [2], Schizophrenia [3], Attention Deficit Disorders [4], Munchausen Syndrome [5], Major Depressive Disorder [6], Addiction [7], Alcohol Abuse [8]

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Pediatric psychosomatic research shows that emotional, behavioral, and psychiatric symptoms are found more often in children and adolescents with chronic illnesses than in healthy children.

With the advent of new treatments for medical diseases such as cancer, asthma, HIV infection, and cystic fibrosis, more children and adolescents are living with chronic illness than ever before. Seventy years ago, persons with cystic fibrosis survived an average of 5 years, while currently the life expectancy for patients with cystic fibrosis is more than 30 years. For children with cancer, the 5-year survival rate has improved dramatically to 79% for the period of 1995 to 2000. Increased survival, however, has brought new morbidities. Children with chronic illnesses are more likely to have emotional, behavioral, and psychiatric symptoms than healthy children and may be psychologically affected or traumatized by medical treatment.

Pediatric psychosomatic medicine, also called pediatric consultation-liaison psychiatry, investigates the psychiatric issues affecting medically ill youths in the context of their development, cognition, communication, familial interactions, and pharmacokinetic dynamics. With the recent addition of psychosomatic medicine as a subspecialty field of psychiatry, the field of pediatric psychosomatics has become an increasingly active area of clinical care and research. Pediatric consultation-liaison psychiatrists, in collaboration with pediatricians, are called on to assess chronically ill children and adolescents for psychiatric illness, to address nonadherence, to investigate unexplained physical symptoms, and to attend to psychosocial stressors. Three aspects of psychiatric consultation in the medically and surgically ill that are specific to working with young patients are:

- An awareness of the cognitive and emotional developmental levels of the patient.
- An appreciation of the essential role of the family.
- A focus on facilitating coping and adjustment to illness, rather than concentrating on psychopathology, in order to encourage an optimal developmental trajectory.

Cognitive and emotional development

Clinicians need a basic knowledge of normal physical, motor, language, cognitive, sexual, and emotional development in chronically ill children in order to distinguish normal responses to stress from detrimental responses. Understanding a child's cognitive abilities to process information is essential when communicating with him or her about his or her disease (Table 1).

While children generally pass through similar stages of cognitive development, clinicians cannot assume that chronologic age is equivalent to mental age. Children with medical illness may not mature at the same rate as healthy children because of delayed neurocognitive development, disruptions in education, and limited social experiences. For example, a 15-year old chronically ill adolescent may function at the level of an elementary school-aged child. Similarly, consultations for adults who have childhoodonset chronic illnesses should inquire into early hospital and medical experiences to provide a fuller understanding of the current level of development.

<table>
<thead>
<tr>
<th>Stage of development [Erikson stages]</th>
<th>Effects of chronic illness</th>
<th>Child's perception of illness</th>
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<tr>
<td>(Piaget stages)</td>
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Table 1
Developmental stages in chronically ill children and adolescents

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### Infancy (0 - 1 y) [trust vs mistrust] (sensorimotor)
- Illness may decrease infant's access to environment
- Parental separation, guilt, anger, and grief may interfere with attachment
- Difficulty with trust and possible sense of helplessness
- Little capacity to understand illness

### Toddler (2 - 3 y) [autonomy vs shame and doubt] (sensorimotor/preoperational)
- Motor and language development may be delayed
- Parental reluctance to set limits
- Bladder and bowel function may be affected
- Little capacity to understand illness

### Preschooler (3 - 5 y) [initiative vs guilt] (preoperational)
- Parental overprotection, regression possible
- Initiative may be discouraged
- Illness can be seen as a punishment for bad behavior

### School-aged child (6 - 12 y) [industry vs inferiority] (concrete operational)
- Possible alienation from peers
- Fewer social interactions because of illness
- Parents may limit social activities using illness as an excuse
- Illness may hamper normal development of self-esteem and sense of mastery
- Illness causation is seen as temporal proximity as well as bad behavior
- Older children may understand illness as a result of contact with germs
- Child may understand the internalization of a disease within the body and may also understand role in disease treatment

### Adolescent (13 - 19 y) [identity vs role confusion] (formal operational)
- Adolescents may be concerned about appearance and medication side effects
- Potential risk-taking behavior, eg, drugs, unprotected sex
- Noncompliance with medical regimen
- Greater understanding of the body processes in disease
- Greater comprehension of the mind-body connection

### Role of the family
Consideration of the genetic and environmental contributions of the family is a critical aspect of comprehensive psychiatric consultation. Recently, a functional genetic polymorphism was shown to moderate the effects of stressful life events on the incidence of depression. Parents are also the legal year and financial decision makers in caring for their children and can even choose whether to inform a child of his or her diagnosis. Feelings of depression, anxiety, helplessness, and distress are
not limited to the patient. Siblings are often affected, especially in cases of tissue donation. Chronic illness can positively or negatively change familial dynamics; psychotherapy or family-focused interventions may be indicated for adjustment difficulties.

Focus on adjustment

The hospital or clinic environment can be distressing or traumatic for the acutely or chronically ill child. Injections, procedures, and surgeries can be particularly stressful experiences for children. Interventions should be used whenever possible to reduce discomfort for these patients. Pain from both medical conditions and treatments can provoke anxiety and affect later pain sensitivities and neurologic development. Posttraumatic stress disorder is a risk from traumatic injury or intense hospital experiences such as transplantations. Identifying and easing potentially traumatic situations may decrease the child’s stress and improve medical outcomes. Children with cancer or asthma The psychological effects of specific medical conditions, such as cancer and asthma, have been the focus of scientific inquiry. Pediatric cancer patients have rates of depression similar to those of the general pediatric population, which may be a consequence, in part, of the use of avoidant coping styles by medically ill children. Interventions such as cognitive-behavioral techniques and use of topical anesthetics and sedation before and during invasive cancer treatments have been shown to decrease anxiety, distress, and pain for pediatric cancer patients.

The most common pediatric chronic illness is asthma, which has been associated with psychiatric problems in both children and parents. More than one third of children with asthma have anxiety disorders, while increased severity of illness is associated with increased psychosocial problems. Parenting difficulties with 3-week-old infants have been associated with subsequent onset of asthma at ages 3 and 6 years, even controlling for socioeconomic differences. Both family therapy and pharmacologic treatments for anxiety and depression have been useful in treating children with asthma. Treatment nonadherence Nonadherence with treatment, another common reason for a psychosomatic consultation request, can range from 11% to 93% in pediatric patients. It adversely affects treatment response, increases the need for additional prescriptions, and may extend the course of illness. Factors such as age, culture, patient and family characteristics, and dosage and means of administration of medication can affect adherence. Furthermore, child psychopathology such as oppositional defiant disorder has been associated with a higher rate of nonadherence with medical regimens. Thus, multiple factors need to be considered when evaluating nonadherence. Psychiatric disorders Many of the psychiatric disorders seen in adult psychosomatic medicine practice are also seen in practices involving children and adolescents, although research on the prevalence of specific conditions is sparse. Delirium is relatively common and has a similar presentation to that seen in adults. Certain symptoms, such as disorientation and psychosis, appear to be less common or more difficult to assess in pediatric patients, while delirium associated with organic causes, including medication toxicity, infection, and metabolic imbalances, is comparable in prevalence to adult delirium. Strategies for treating delirium include reorienting the child through reassurance, use of familiar objects, and clocks and calendars (when age appropriate) in the hospital room. When pharmacologic treatment is indicated, typical and atypical antipsychotic medications are used. Other psychiatric conditions that may be encountered in chronically ill children include depression, anxiety, somatization, and illness falsification. Assessing psychiatric illness is often difficult because of physical symptoms that interfere with diagnostic measures; this can lead to both overdiagnosis and underdiagnosis. Depression appears to be similarly prevalent in chronically ill and healthy children; in children with chronic illness, it can lead to complications in medical outcomes and increased disability.

Somatization can occur when a child learns that reporting physical symptoms garners more attention than reporting emotional distress. Illness falsification, though rare in children, may manifest as factitious fevers, self-induced rashes, or deliberately manipulated insulin levels. Somatization, illness falsification, and Munchausen syndrome by proxy (illness falsification by caretaker) can all lead to unneeded treatment and, in extreme cases, death. Management of these disorders requires a clear understanding of the delicate interplay between biologic, psychological, and social factors that affect psychiatric symptoms. Use of psychotropic medication Psychotropic medications for symptoms as well as syndromes can be quite helpful in improving the quality of life of many patients. The prevalence of psychotropic use in the general pediatric population is estimated to be around 6%, but the prevalence of psychotropic medication use in
medically ill children is not well documented. **Table 2** shows psychotropic medications with their FDA approval status for use in children and adolescents.

<table>
<thead>
<tr>
<th>Class</th>
<th>Medications</th>
<th>FDA labeled for use in children</th>
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<tbody>
<tr>
<td><strong>Anti-depressants</strong></td>
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<tr>
<td>Amitriptyline (generic)</td>
<td>12 y and older, for depression, polyneuropathy</td>
<td>No</td>
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<tr>
<td>Bupropion (Wellbutrin, Zyban)</td>
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<td>No</td>
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<td>Citalopram (Celexa)</td>
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<tr>
<td>Desipramine (Norpramin, generic)</td>
<td>No</td>
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<tr>
<td>Doxepine (Adepin, Sinequan, generic)</td>
<td>12 y and older, for mixed anxiety and depressive disorder</td>
<td>No</td>
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<tr>
<td>Escitalopram (Lexapro)</td>
<td>No</td>
<td></td>
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<tr>
<td>Fluoxetine (Prozac, generic)</td>
<td>7 - 17 y, for depression, OCD</td>
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<td>Fluvoxamine (Luvox)</td>
<td>No</td>
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<tr>
<td>Mirtazapine (Remeron)</td>
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<tr>
<td>Nortriptyline (Pamelor, generic)</td>
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<tr>
<td>Sertraline (Zoloft)</td>
<td>No</td>
<td>6 - 17 y, for OCD</td>
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<tr>
<td>Paroxetine (Paxil, generic)</td>
<td>No</td>
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<tr>
<td>Trazodone (Desyrel)</td>
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<td>Venlafaxine (Effexor)</td>
<td>No</td>
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<tr>
<td><strong>Anxiolytics</strong></td>
<td>Alprazolam (Xanax, generic)</td>
<td>No</td>
</tr>
<tr>
<td>Medicine</td>
<td>Use</td>
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<tr>
<td><strong>Clonazepam</strong> (Klonopin, generic)</td>
<td>Up to 10 y, or 30 kg, for epilepsy</td>
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<tr>
<td><strong>Lorazepam</strong> (Ativan, generic)</td>
<td>12 y and older, for insomnia (oral), anesthesia premedication (oral)</td>
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<tr>
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<td>12 y and older, for insomnia (oral), anesthesia premedication (oral)</td>
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<tr>
<td><strong>Carbamazepine</strong> (Tegretol, generic)</td>
<td>Mood stabilizers</td>
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<tr>
<td><strong>Gabapentin</strong> (Neurontin)</td>
<td>12 y and older, for depression, polyneuropathy</td>
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<tr>
<td><strong>Lamotrigine</strong> (Lamictal)</td>
<td>3 - 12 y, for partial seizures</td>
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<tr>
<td><strong>Lithium</strong> (Eskalith, generic)</td>
<td>2 y and older, for partial seizures</td>
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<tr>
<td><strong>Oxcarbazepine</strong> (Trileptal)</td>
<td>12 y and older, for bipolar disorder</td>
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<tr>
<td><strong>Valproate</strong> (Depakote, Depacon, generic)</td>
<td>4 - 16 y, for epilepsy</td>
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<tr>
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<td>4 - 16 y, for epilepsy</td>
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<tr>
<td><strong>Valproate</strong> (Depakote, Depacon, generic)</td>
<td>10 y and older, for migraine prophylaxis, epilepsy</td>
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<tr>
<td><strong>Aripiprazole</strong> (Abilify)</td>
<td>Anti-psychotics</td>
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<tr>
<td><strong>Chlorpromazine</strong> (Thorazine)</td>
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<tr>
<td><strong>Droperidol</strong> (Inapsine)</td>
<td>6 mo and older, for anxiety about presurgery</td>
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<tr>
<td><strong>Haloperidol</strong> (Inapsine)</td>
<td>2 y and older, for prophylaxis of postoperative nausea and vomiting</td>
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| **Haloperidol** (Inapsine) | 3 y and
Terminal illness

Terminal illness and the death of a child is a sad and inevitable aspect of pediatric hospital consultation that provokes significant anxiety in the patient, family, and caregivers. Informing a child that he or she is going to die is difficult, but parents rarely regret sharing this information with the child. Children in different developmental stages have differing conceptions or misunderstandings of death and may be helped by frank conversations with family or by play therapy facilitated by pediatric psychosomatic medicine specialists. Comfort is another important issue at the end of life; parents have reported that at the end of life, their child had a great deal of suffering from pain, dyspnea, or fatigue and had “no fun.” Psychiatrists can provide treatment for a dying child while also offering support to the family and hospital staff. **Conclusion**

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Genetics, a comprehensive and integrative field such as pediatric psychosomatic medicine can only be expected to expand. Recent research on cytokine-induced sickness behavior and the periodic identification of novel genetic markers in patients with chronic diseases provide new information that may help in the development of future treatments.

Clinicians providing psychiatric care must always remain vigilant in understanding how these treatments are experienced by children and their families. Early identification of psychiatric symptomatology will enhance outcomes in at-risk children. Appropriate diagnosis of mental disorders, prompt psychiatric treatment, and recognition of normal developmental processes in children and adolescents are critical aspects of caring for the whole child.

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References:

11. National Child Traumatic Stress Network. Medical Events & Traumatic Stress in Children and


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