

COMMON CLINICAL DIAGNOSES AND CONDITIONS**TOXIC INGESTION****INTRODUCTION**

In 2006, the National Data Poison System captured more than 4 million calls to poison control centers in the United States, 2.4 million of which were calls regarding human exposures. More than 50% of reported toxin exposures occur in children under age 6 years. Furthermore, ingestion accounts for 75% of all toxin exposures in younger children. In this age group, toxin ingestion is frequently unintentional and involves non-pharmacologic agents, but therapeutic errors in the administration of pharmacologic agents do occur. In adolescents, toxin ingestion is more often intentional or associated with substance abuse, and carries with it greater morbidity and mortality, particularly when pharmacological agents are involved. Pediatric hospitalists often provide immediate care, coordinate care with subspecialists, or arrange for transfer to another facility when appropriate.

KNOWLEDGE

Pediatric hospitalists should be able to:

- List the pharmacologic and non-pharmacologic agents commonly ingested by pediatric patients and describe how the frequency of each category changes with age.
- Compare and contrast the risk factors and co-morbidities associated with unintentional versus intentional ingestion.
- Describe the signs and symptoms of acute ingestion, including known toxidromes for commonly ingested agents such as salicylates, acetaminophen, narcotics, hallucinogens, stimulants, and others.
- Discuss the risk factors for and presentation of acute and chronic lead poisoning.
- List the laboratory tests that support or refute the diagnosis or assist with the management of common ingestions.
- List the agents detected in locally available blood and urine toxicology screens and describe the benefits and limitations of this testing.
- Explain the indications for and limitations of decontamination therapy, including dermal, ocular, and gastric decontamination methods.
- Identify toxins that have a specific antidote available and explain the indications and limitations of each.
- List local resources that provide information and advice regarding pediatric toxin ingestion management, and recognize there is a single phone number that may be used in the United States to access all regional poison center resources.
- Summarize the indications and goals of hospitalization, attending to acute and chronic medical needs and psychosocial intervention.
- Review the criteria for and process of discharge including psychiatric evaluation, inpatient psychiatric facility transfer, foster care and other elements important for safe discharge.

SKILLS

Pediatric hospitalists should be able to:

- Obtain a focused history, including detailed information about potential exposures, such as the type, amount, and timing of the ingestion.
- Perform a focused physical examination, with attention paid to signs and symptoms that may indicate the ingestion of a particular toxin.
- Efficiently access institutional and local resources to obtain information and advice regarding the diagnosis and management of acute ingestion.
- Identify patients presenting with common toxidromes and efficiently institute appropriate therapy.
- Recognize life-threatening complications such as cardiac dysrhythmias, respiratory depression, or mental status change and institute appropriate therapy in a timely fashion.
- Recognize potential co-morbidities associated with intentional ingestion, such as depression, abuse, or other mental illness.
- Correctly order and interpret basic tests, such as serum chemistries, blood gases, and electrocardiograms, and identify abnormal findings that require additional testing or consultation.
- Develop an appropriate treatment plan based on the presumptive or confirmed agent and provide decontamination or antidote therapy when appropriate.

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- Determine the appropriate level of care and duration of observation for a given toxin, recognizing that some agents may have delayed toxic effects.
- Involve subspecialists when appropriate, including social work and/or psychiatric consultation for cases of non-accidental ingestion as appropriate.
- Correctly identify patients who require legal (protective or other) involvement and efficiently access appropriate agencies.

ATTITUDES

Pediatric hospitalists should be able to:

- Counsel the family/caregiver and other professional staff on the possible etiology and outcomes of the ingestion episode.
- Assess the social environment to determine the risk of future exposure and the need for mitigation of risk factors prior to discharge.
- Educate caregivers regarding proactive risk reduction measures, such as the safe and effective storage, use and administration of medications.
- Realize the importance of remaining vigilant regarding changes in recreational drug availability and use as well as safety profile updates on pharmacologic and non-pharmacologic agents.

SYSTEMS ORGANIZATION AND IMPROVEMENT

In order to improve efficiency and quality within their organizations, pediatric hospitalists should:

- Lead, coordinate or participate in the development of systems that integrate hospital, community, and national resources to provide up-to-date and evidence-based information about toxin ingestions and promote timely recognition and treatment of both intentional and unintentional ingestions.
- Lead, coordinate or participate in efforts to educate healthcare providers about the most common ingestions in the pediatric population.
- Lead, coordinate or participate in efforts to educate healthcare providers and the community, regarding ways to mitigate medication errors.