

Medical device problems hurt 70,000+ kids annually

July 26 2010, By LINDSEY TANNER , AP Medical Writer

(AP) -- More than 70,000 children and teens go to the emergency room each year for injuries and complications from medical devices, and contact lenses are the leading culprit, the first detailed national estimate suggests.

About one-fourth of the problems were things like infections and eye abrasions in contact lens wearers. These are sometimes preventable and can result from wearing contact lenses too long without cleaning them.

Other common problems found by researchers at the U.S. [Food and Drug Administration](#) include puncture wounds from [hypodermic needles](#) breaking off in the skin while injecting medicine or [illegal drugs](#); infections in young [children](#) with ear tubes; and skin tears from pelvic devices used during gynecological exams in teen girls.

Malfunction and misuse are among possible reasons; the researchers are working to determine how and why the injuries occurred and also are examining the prevalence in adults. Those efforts might result in FDA device warnings, depending on what they find, said study co-author Dr. Brock Hefflin.

The most serious problems involved implanted devices such as brain shunts for kids with hydrocephalus (water on the brain); chest catheters for cancer patients receiving chemotherapy at home; and insulin pumps for diabetics. Infections and overdoses are among problems associated with these devices. Only 6 percent of patients overall had to be

hospitalized.

Dr. Steven Krug, head of [emergency medicine](#) at Chicago's Children's Memorial Hospital, said the study highlights a trade-off linked with medical advances that have enabled chronically ill children to be treated at home and live more normal lives.

Home care can be challenging for families; Krug says he has seen children brought in because catheters were damaged or became infected.

"[Health care providers](#) need to be aware of these kids and their devices and how to recognize or diagnose" related problems, Krug said. He was not involved in the study.

The study appears in *Pediatrics*, published online Monday.

Hefflin and lead author Dr. Cunlin Wang work in the FDA's Center for Devices and Radiological Health. They note there has been recent concern about medical device safety in children, particularly since many devices intended for adults are used in children.

The researchers analyzed medical records from ER visits reported in a national injury surveillance system. Based on data from about 100 nationally representative hospitals, they estimated that 144,799 medical device-related complications occurred during 2004 and 2005, or more than 70,000 yearly.

Almost 34,000 problems were linked with [contact lenses](#) in the two-year period. The rest were scattered among 12 other categories including general medical devices such as needles and catheters, gynecology devices and heart devices.

Hefflin said the study is the first to evaluate device-related injuries in

children only. It did not include device problems in already hospitalized children.

More information: Pediatrics: <http://www.pediatrics.org>

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