

## Health Brief: Propofol appears safe for procedural sedation in older teens

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- Campbell SG, et al. *Pediatr Emerg Care*. 2015;31:762-765, <http://bit.ly/1OV6ztR>.

Emergency department (ED) patients ages 16-19 years receiving propofol for procedural sedation had a lower incidence of adverse events and tolerated larger adjusted doses than adults, according to a retrospective study of 4,063 patients.

Intravenous propofol often is used for procedural sedation in adult ED patients because it has a rapid onset and short half-life. Its use in children, however, is controversial. Propofol infusion syndrome, which can lead to death, has occurred rarely in children treated with the sedative for more than 48 hours in intensive care units.

Ketamine often is used for procedural sedation in children in the ED due to its safety profile. A meta-analysis of ketamine sedations, however, showed that being older than 13 years was associated with adverse respiratory and airway events. Ketamine also has a slower onset and longer half-life than propofol, making it challenging to use for short procedures in a busy ED.

The authors of this study compared the incidence of hypotension and hypoxia in 230 youths ages 16-19 sedated with propofol with 2,853 adults ages 20-65 and 980 adults over 65. Most patients also received fentanyl.

Results showed teens were significantly less likely to develop hypotension than adults and seniors (9%, 17% and 16%, respectively). The rate of hypoxia also was lower in teens than adults and seniors (0.4%, 1.4% and 2.5%, respectively). In addition, teens received higher doses of propofol per kilogram/minute than adults.

There were no statistical differences in interventions related to procedural sedation, including airway repositioning maneuver, oral/nasal airway, assisted ventilation and endotracheal intubation, among the three age groups.

The authors concluded that the study supports the use of propofol in teens ages 16 and older.

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