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Title*: The Impact of an Updated Amphetamine Triage Guideline on ED Referral Rates*

Importance: The Missouri Poison Center updated their amphetamine triage guideline (TG) to a mg/kg formula on December 14th, 2015 to help their Certified Specialists in Poison Information (CSPI) manage cases more effectively.

Objective: To compare referral patterns and outcomes for amphetamine exposures 12 months pre- and post- triage guideline revision.

Design, Setting, and Participants: A retrospective chart review was conducted through archived ToxicallÂ® records of amphetamine cases over two periods: December 14th, 2014 to December 13th, 2015 and December 14th, 2015 to December 13th, 2016. The participants were population-based from those who called the Missouri Poison Center from a Missouri area code. ToxicallÂ® records were searched to include: drug exposures with an AAPCC code of 001000 (amphetamine and related compounds), 201128 (methylphenidate), and 0201127 (methamphetamines), with an unintentional-general, unintentional-therapeutic error or unintentional-unknown documented as the reason for call. Cases were subject to these exclusions: multi-substance, confirmed non-exposures, intentional gestures (suicide, misuse, abuse), and those already at a healthcare facility (HCF). After exclusions 236 cases for period one and 278 for period two were identified.

Exposure: The former and updated TG were retrospectively applied to all cases.

Measures: The rate of ED referrals with the updated TG and the former TG during each period.

Safety measures looked at the patient outcomes documented by the CSPI.

Results: During the first period of the study 46 cases (19.5%) were referred to ED by CSPIs while only 20 cases (8.5%) warranted ED referral upon triage review with the updated TG (OR 2.16, 95% CI 1.49 - 4.57). During the second period of the study only 31 cases (11.2%) were referred to the ED by CSPIs; however, a review with the former TG predicted 84 cases (30.2%) would have been referred to ER (OR 3.5, 95% CI 2.19-5.43). Patient safety was similar under both TG.

Conclusion: The updated TG developed by the MPC, allows for CSPIs to observe higher amounts of amphetamine at home. This results in fewer ED referrals and better healthcare resource utilization in the event of an exposure to amphetamines.