

ISSUE BRIEF
ALL-TERRAIN VEHICLE SAFETY

A KIDS COUNT
Research Brief

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KENTUCKY YOUTH ADVOCATES



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Children and ATVs: Riding in Harm's Way

KYA presents this children's health issue brief to Kentucky's policymakers, community leaders, families, and child advocates. You will find data, resources, and recommendations on keeping children safe from unnecessary death and injury.

ATV use in Kentucky

The recreational use of all-terrain vehicles (ATVs) has increased over the past decade across the country.¹ Use of these vehicles in Kentucky seems to follow that trend. While ATVs provide fun for riders, they also present a serious threat to the safety of our children when used improperly.

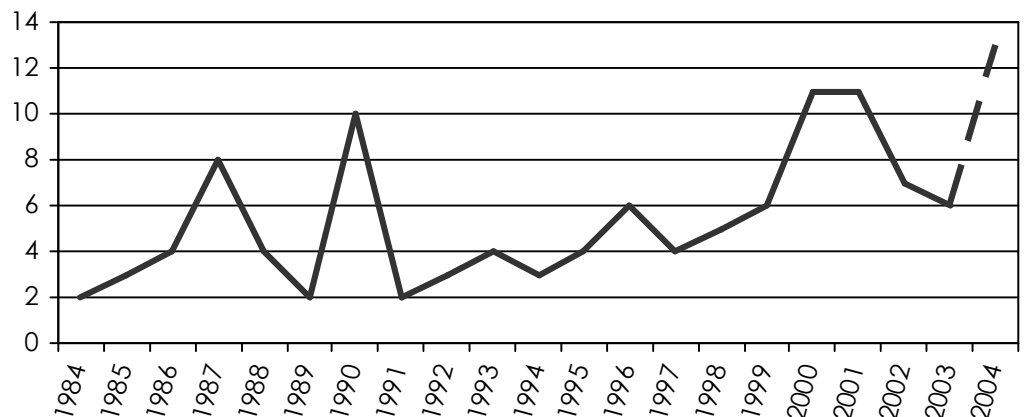
Over the past two decades, 105 Kentucky children under the age of 18 died from ATV crashes, and many thousands more sustained injuries. In the past 5 years alone, 41 Kentucky children under the age of 18 died.² After a decline in 2003, preliminary data for 2004 show that more children died from ATV-related injuries than in any year since the state started collecting data 20 years ago (see graph

below).³

ATV deaths for people of all ages have increased significantly in recent years as well. During the 1990s, Kentucky saw an average of 11 deaths per year due to ATV crashes. For the first four years of this decade alone, the average was 35 deaths per year.

Even when a child is not injured, ATV fatalities often touch the lives of Kentucky's youth. In 2003, for example, three children lost their 23-year-old mother in an ATV crash in Larue County, and in 2004, a 28-year-old mother of four children died in Muhlenberg County.^{4,5} Unfortunately, child fatality data do not capture the total number of children who are injured, sometimes even paralyzed, by ATV crashes each year. Kentucky currently does not collect statewide data on ATV injuries. In the absence of a comprehensive accounting of ATV injuries, we must rely on estimates of the number of children injured from a limited number of sources. Numbers gathered from the University of Kentucky's Chandler Medical

ATV Fatalities to Youth under 18 in Kentucky, 1984-2003



Source: Kentucky Department for Public Health, Environmental Management Branch

Children under 16 years old represented 17 percent of all ATV drivers in 2001, but they represented 26 percent of people injured in ATV accidents.

- Consumer Product Safety Commission, 2001

Center in Lexington, Kosair Children's Hospital in Louisville, and the University of Louisville Trauma Institute found that 131 children from Kentucky were severely injured in ATV crashes between January 1997 and March 1, 2000.⁶

Nationally, 37,100 children under 16 years old were estimated to receive hospital emergency room treatment following an ATV crash in 2002, and that number has grown each year since 1995.⁷ The increase in all ATV injuries cannot be fully explained by an increase in the number of ATVs in use, according to the Consumer Product Safety Commission (CPSC).⁸

In conjunction with a study of ATV owners by the all-terrain vehicle industry, the CPSC estimated the risk of injury to riders and drivers in a 2001 study.⁹ The study found:

- Riders under 16 were more likely to be injured for each hour spent riding than those riders 16 and over,
- Drivers under 16 were more likely to be injured for each hour spent driving than older drivers,
- Drivers under 16 had a higher risk of getting injured regardless of the amount of time spent driving ATVs, and
- The risk of injury for both riders and drivers under 16 years of age increased between 1997 and 2001.

County data

As KYA found in the rural family report published earlier this year, being outdoors and enjoying the benefits of nature is a Kentucky pastime and an important part of

our culture and identity.¹⁰ Unfortunately in the past 20 years, too many children have died in ATV crashes around the state (see map below). The limited amount of data we do have shows that certain counties in the state have experienced higher numbers of child fatalities due to ATV crashes.

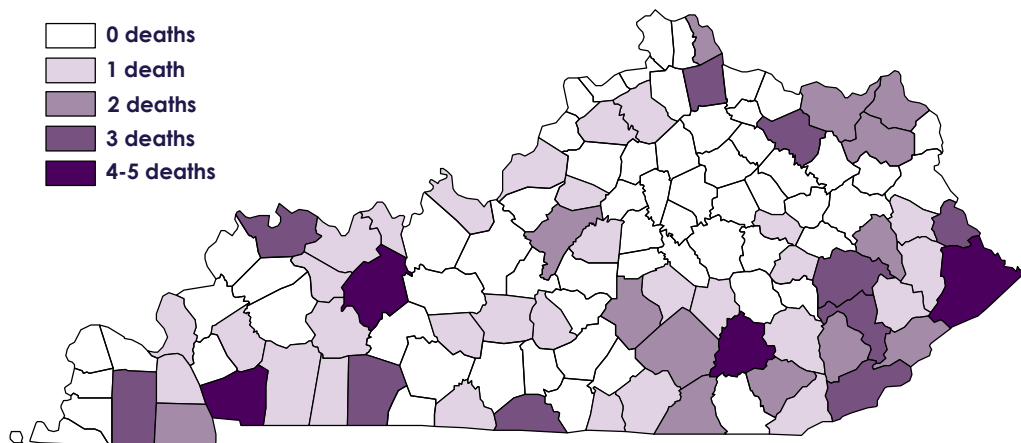
Laurel, Ohio, Pike, and Trigg counties have each been the home to four or more children who have died in ATV crashes since 1984. Ten other Kentucky counties have had at least 3 children die in ATV crashes during that same time period.¹¹

What makes ATVs dangerous for children?

Adult-size engines

Many children under 16 use ATVs that are more powerful than are recommended for their age group. According to the National Safe Kids Campaign, in 2001, 87 percent of ATV-related injuries suffered by children under 16 were caused by adult-sized ATVs. They also add "children under 16 riding ATVs are four times more likely than ATV operators over 16 to experience an injury requiring emergency room treatment."¹² Standard industry recommendations on engine size state that youth under 12 should not drive ATVs with an engine size 70 cubic centimeters (cc) or greater. For youth under 16, the engine should be 90 cc or less. Despite these recommendations and the Kentucky law that follows these recommendations, many youth are riding ATVs with engines designed for adults. The average size engine of ATVs driven by

Child ATV-related Fatalities by County, 1984-2003



children is 240 cc, far more powerful than the industry's 90 cc recommendation.¹³ Furthermore, anecdotal evidence shows ATV dealers often recommend ATVs with engines designed for adults, even when they know the purchase is intended for use by a child under 16.^{14, 15}

Passengers

ATV drivers who carry passengers increase the likelihood of a crash. Still, many people carry passengers with them, even though manufacturers discourage this practice. Riding with a passenger can throw off the balance of the vehicle and cause a crash, especially in hilly or mountainous terrain.

Limited helmet use

Head injuries can be greatly reduced with proper use of helmets, but they are not widely used by ATV drivers. It is estimated that helmets would prevent almost 50 percent of the most severe head injuries.¹⁶ Many of these head injuries are so severe that the youth may never be able to recover and live a "normal" life. From 1997 to 1999 only 5 out of the 131 Kentucky children that were severely injured in ATV crashes were wearing a helmet.¹⁷ Other studies show that the majority of ATV related deaths occurred due to head injuries.¹⁸ Kentucky law does require ATV drivers to wear helmets on public land, but it does not go far enough as helmets are currently not required on private land. A study that compared child injuries in a state with helmet laws to one without helmet laws found that regulations do make a difference in the number of risk factors to which a

child is exposed, although the helmet law alone did not completely prevent children from being killed or injured on an ATV. Ultimately, the report concluded that youth under the age of 16 should not use ATVs.¹⁹

Lack of training

Finally, few people receive training on how to drive an ATV, even though the trade association for manufacturers and dealers, the Specialty Vehicle Institute of America (SVIA), recommends that people receive hands-on training.²⁰ Nationally, only 7 percent of drivers reported learning to drive their ATV from "an organized training program, dealer, or salesman."²¹ The remaining individuals report having learned from a friend, relative, or themselves.

Policy approaches to keeping youth riders safe

Kentucky's current ATV laws require that:

- Helmets be worn when ATVs are driven on public property (unless they are being used for commercial purposes),
- Engine size limits of 70 cc for youth under 12 years old and 90 cc for youth 12 to 16, and
- No ATVs be ridden on public roads, unless for commercial purposes or to cross a highway.²²

These laws are a good start, but they do not provide the comprehensiveness that is needed to effectively protect children from injury or death. Kentucky legislators have introduced child safety legislation for the past couple of years with no result, even though many other states have instituted more far-reaching policies.

“Children under 16 riding ATVs are four times more likely than ATV operators over 16 to experience an injury requiring emergency room treatment.”

- National Safe Kids Campaign, 2004

Specialty Vehicle Institute of America's Model State Legislation

1. **Protective gear required:** All ATV riders are required to wear eye protection and an approved safety helmet.
2. **Prohibits passengers:** The carrying of passengers is not allowed in any circumstance.
3. **No one under age 16 may operate an adult-sized ATV:** Adult-size ATVs (engine capacity greater than 90 cc) are to be operated on public land only by those age 16 and older.
4. **Youth age limits:** Youth-size ATVs (engine capacity 70 cc up to and including 90 cc) are only allowed to be operated on public land by those age 12 and older.
5. **Adult supervision:** Persons under age 16 must be under continuous adult supervision while operating an ATV on public land.
6. **Education:** States must implement a comprehensive ATV safety education and training program, which provides for the hands-on training of ATV operators.
7. **Safety certification:** All persons operating an ATV on public land must have a safety certificate.

Source: Specialty Vehicle Institute of America, Model State ATV Legislation Fact Sheet



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*“An Independent Voice for
Kentucky’s Children”*

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West Virginia provides an example of balancing the fun of ATV driving with safety requirements at the Hatfield-McCoy public trail system. The trail rules require supervision for drivers under 16, that no passengers ride unless the ATV is specifically designed to carry more than one person, eye protection and helmet use, and that all drivers meet the minimum age requirement of the manufacturer.²³

Between 2000 and 2002, the trail system saw an estimated 150,000 user days, yet only 55 crashes occurred with 7 of them requiring hospitalization for the rider.²¹ There were no fatalities in the trail system during that time period, despite the fact that West Virginia’s rate of death for ATV riders per 100,000 ATVs sold was more than twice the national rate between 1996 and 2002.²⁴

Kentucky Youth Advocates Recommendations

Policymakers need to make ATV safety one of the state’s child health and safety priorities in order to prevent additional child deaths and debilitating injuries. We believe

these recommendations can be enacted without having negative impacts on the economy. We think the need to protect children outweighs people’s right to decide what size ATVs to buy for their children or whether or not they should wear a helmet. Many of these recommendations are supported in model legislation drafted by the Specialty Vehicle Institute of America, a national nonprofit trade association for manufacturers and dealers of ATVs (see box on page 3). The American Academy of Pediatrics recommends even stricter laws including completely prohibiting youth from riding ATVs.²⁵

Kentucky Youth Advocates recommends the following legislative action:

- Require all youth who drive ATVs to wear approved helmets,
- Enact and enforce no-passenger laws,
- Enact and enforce policies designed to end the sale of adult-size ATVs to youth,
- Require appropriate operator training for all those who use ATVs, and
- Implement a Statewide Trauma Registry System to accurately track ATV injuries.

Endnotes

¹ Safe Kids Coalition. *Using All-Terrain Vehicles: A Growing and Potentially Dangerous Trend for Children*. Available at www.safekids.org

^{2,3,11} Data obtained from the Kentucky Department for Public Health, Environmental Management Branch, January 2004.

⁴ Messenger Inquirer. *Mother of three dies after ATV accident*. Sept 11, 2003.

⁵ Messenger Inquirer. *Accident Kills Muhlenburg Woman*. June 23, 2004.

⁶ Louisville Courier-Journal. *Injuries, Deaths from ATVs Rising in Kentucky: Children 14 or Younger Often the Ones Hurt*. May 7, 2000.

^{7,8} Consumer Product Safety Commission. *2002 Annual Report of ATV Deaths and Injuries*. September, 2003.

^{9,20} Levenson, M. S. *All-Terrain Vehicle 2001 Injury and Exposure Studies*. Consumer Product Safety Commission, January 2003.

¹⁰ Voices for Alabama’s Children, Kentucky Youth Advocates, and the Tennessee Commission on Children and Youth. *The Rural South: Listening to Families in Alabama, Kentucky and Tennessee*. February 2004.

¹² National Safe Kids Campaign (NSKC). *ATV Injury Fact Sheet*. 2004.

^{13,14,21} Natural Trails and Waters Coalition, Consumer Federation of America, and Bluewater Network. *ATV Safety Crisis: America’s Children Still at Risk*. August 2003.

¹⁵ Rice, J. *Strategies for Prevention of All-Terrain Vehicle Injuries in Children*.

^{16,17} 2000 Kentucky Child Fatality Review Report. Frankfort, KY: Cabinet for Health Services.

^{18,19} McKeenan, H. T. and S. L. Bratton. *All-Terrain Vehicle Legislation for Children: A Comparison of a state with and Without a Helmet Law*. *Pediatrics* Vol. 113, No. 4 April 2004.

²² Kentucky Revised Statutes. KRS 189.515 “Restrictions on Operation of All-Terrain Vehicles”. Available at: <http://www.lrc.state.ky.us/krs/189%2D00/515.pdf>.

²³ Brochure from Hatfield-McCoy Trail System. Available at www.trailsheaven.com/rules.cfm.

²⁴ Helmkamp, J. C. *ATV Related Deaths in West Virginia: 1990 - 2003*. *The West Virginia Medical Journal*. Vol. 99. November / December 2003.

²⁵ American Academy of Pediatrics. *All-Terrain Vehicle Injury Prevention: Two-, Three-, and Four-Wheeled Unlicensed Motor Vehicles*. *PEDIATRICS* Vol. 105 No. 6 June 2000, pp. 1352-1354. Available at: <http://aappolicy.aappublications.org/cgi/content/abstract/pediatrics;105/6/1352>.