SMALL RIDERS, FAST MACHINES:

FLORIDA'S NEW E-BIKE LAW AND WHAT PARENTS SHOULD KNOW

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E-bikes are spreading quickly through our neighborhoods, with injuries linked to them rising fast. The state of Florida is finally taking notice – Senate Bill 382 recently passed the legislature, aiming to create some basic rules for e-bikes on sidewalks and mandating that police finally start **tracking e-bike crashes**. But while this legislation is a necessary first step, it focuses largely on protecting pedestrians and gathering data for the future.

It doesn't do much to protect the kids riding the bikes right now.

Until the state catches up, the responsibility to keep young riders out of the ER falls entirely on parents. Fortunately, we don't have to wait for Florida's new safety task force to tell us where the dangers lie.

National data, while not yet comprehensive, already shows that risk clearly concentrates in specific **ages, behaviors,** and **street types**. Picture a Saturday afternoon where a child takes their new e-bike to a friend's house: let's walk through the riskiest parts of that seemingly trivial ride so you can do your best to protect them.

1. How Big and How Fast: E-Bike Injury Growth

Imagine standing outside a neighborhood school at dismissal and watching students leave: some walking, some in cars, and more each year on e-bikes. The reality is the e-bike industry is growing exponentially. According to a 2025 safety briefing from the U.S. House of Representatives, more than 1.7 million e-bikes were sold in the United States in 2024 – nearly a **75% increase** from the year before.

With that growth comes a sharp rise in harm. National injury tracking from the U.S. Consumer Product Safety Commission shows a massive spike in emergency department visits related to "**micromobility**" devices (a group that includes e-bikes, e-scooters, and hoverboards). From 2017 through 2022, there were an estimated **360,800 ER** visits and **233 deaths** related to these products, with injuries growing at an average of **23% per year**.

For e-bikes specifically, the data is staggering. Between 2017 and 2022, U.S. hospitals reported more than **53,000 e-bike-related injuries**. Across the country, **e-bike injuries surged 293%** between 2019 and 2022, nearly tripling in just three years. In major metropolitan areas, crash rates are reflecting that same spike, with some cities reporting **20% year-over-year increases** in e-bike collisions.

WHAT TO WATCH FOR

The sheer volume of e-bikes being sold means **your child is going to be exposed to them**, whether you buy one or not. Parents need a mental reset: e-bikes are not a passing neighborhood fad. They are **motor vehicles** that carry a statistically significant risk of injury.

FAMILY TAKEAWAY

E-bike injuries are rising fast, and one thing is clear: children are the ones suffering the injuries, which means adults must be the ones taking responsibility. A child's e-bike should be treated as a real vehicle in real traffic, with **clear limits** on whether they ride at all, how often, and on which types of trips.

2. Ages 10–13 in the Crosshairs: Who Is Getting Hurt on E-Bikes?

Picture a 12-year-old riding to school on an e-bike because friends are doing the same, weaving through morning traffic while glancing down to adjust assist levels. Available injury data shows that **early adolescence** is the absolute epicenter for e-bike harm.

According to congressional safety briefings, the age group most commonly affected by e-bike injuries is **10 to 13 years old**, with some pediatric studies reporting that over **44%** of all e-bike injuries occur in this bracket. These findings align with national tracking from the Consumer Product Safety Commission, which notes that children **14 and younger** account for roughly **36%** of all micromobility injuries, despite making up only 18% of the U.S. population.

Helmet use and hospitalization patterns make the data for this specific age group even more concerning. Pediatric researchers found that children on e-bikes use helmets less often, and have a much higher rate of hospitalization, compared to kids riding traditional bicycles or mopeds. When children are injured on e-bikes, they are simultaneously less likely to have head protection and more likely to require inpatient care.

Combined with the massive concentration of injuries among 10- to 13-year-olds, these findings point to a dangerous intersection: **high speeds**, a **lack of protective gear**, and still-developing **traffic judgment** colliding right at the age when kids are pushing for independence.

WHAT TO WATCH FOR

Before saying yes to an e-bike for a 10- to 13-year-old, **look at their current habits**. Do they already follow crossing rules on foot? Do they reach for a helmet without you having to nag them? Do they truly understand that an e-bike puts them in live traffic, not just on the sidewalk?

FAMILY TAKEAWAY

The 10–14 age bracket is clearly the highest-risk group for e-bike injuries. Decisions about giving a pre-teen an e-bike must be based on their **maturity**, consistent helmet use, and real **understanding of traffic** – not just their desire to keep up with what their friends are doing.

3. High-Risk E-Bike Behaviors Parents Must Ban

Think of a 12-year-old on a throttle-style e-bike, riding with friends, standing on the pedals to "show off," no helmet, and checking a phone at each light. Available research on e-bike crashes sheds light on how much these choices clearly and significantly raise injury risk.

Riders who **chase each other** or play around while riding have **over 20 times** higher odds of being injured compared to a safe rider. Continuing to ride an e-bike with a mechanical problem, like bad brakes or loose parts, increases the likelihood of a crash by **12 times** compared to using a properly maintained bike. And not surprisingly, risky behaviors like riding against traffic substantially increase the danger.

Helmet use, distraction, and daily riding time show similarly strong effects that parents can directly influence:

HELMETS: Skipping a helmet doesn't just make head injuries worse; it correlates to a **higher crash rate overall**. Riders who skip helmets are more likely to engage in multiple unsafe behaviors, and those behavior patterns are consistently linked to substantially higher crash risk.

PHONES: Answering or making a **phone call** while riding spikes the odds of injury by nearly **11 times**.

RIDE TIME: Crash risk also increases with the amount of time riders spend on their e-bikes each day. Riders using an e-bike for more than an hour daily are about **11 times** more likely to crash compared to those riding less than 10 minutes. While expecting kids to ride for less than 10 minutes isn't practical, limiting extended, hours-long joyrides does appear to help.

Overall, these numbers identify a clear list of behaviors, **goofing** around, riding **broken** bikes, **running red lights**, going the **wrong way**, **skipping helmets**, **using phones**, and **elongated daily ride times**, that turn a modest baseline risk into a highly probable crash.

The Psychology of a Safe Rider

Now picture two kids on the same block: one **coasting steadily**, **helmet clipped**, **watching** for cars; the other **weaving**, **laughing**, and **darting** across lanes. Available psychological research helps explain why their risk is so different.

Young riders who view **risky riding** as "fun" are highly likely to take dangerous chances. And the flip side is true: riders who have a strong internal **sense of rules**, and view themselves as "**responsible riders**," are much less likely to take those risks. Research suggests that psychological factors, including a rider's sense of right and wrong and their self identity, can explain a large share of risky riding behavior, with some models accounting for up to about 50% of the variation. This means conversations about identity ("**you're a careful rider**") and values ("**we ride responsibly**") can genuinely influence how teens choose to act when you aren't watching.

WHAT TO WATCH FOR

Listen to how your child talks about riding; if "fun" means **weaving**, **racing**, or riding **broken** bikes, that is a cue to reset **both the rules and how they see themselves on the road**.

FAMILY TAKEAWAY

Behaviors like **goofing around**, riding a broken e-bike, **going the wrong way**, running red lights, **using a phone**, long daily ride times, and **skipping helmets** turn a modest baseline risk into many-times higher odds of an injury accident. Firm family rules on these behaviors, combined with regular conversations about **being the kind of rider who values others' safety**, directly deter the attitudes and choices that drive a large share of risky intentions.

4. Streets, Seasons, and Surfaces: Where E-Bike Risk Spikes

Imagine two after-school rides: one on a **quiet neighborhood greenway** at a **low speed** with plenty of **daylight**, and another along a **busy**, **multi-lane** suburban road at **dusk** with cars changing lanes around a young rider. Environmental evidence shows that e-bike risk isn't just about the rider's behavior; it rises and falls drastically based on the **season**, the **street type**, and the road **conditions**.

National safety tracking marks the warmer months, May through October, as the undisputed danger season for on-road e-bike accidents. But where these accidents happen is what parents need to pay attention to the most. The data points to a few specific **environmental hazards**:

The Suburban Trap: Infrastructure studies reveal that riders on suburban or township roads are actually **far more likely to be injured** than those on dense urban streets. Suburbs often feature faster-moving traffic, fewer dedicated bike lanes, and road designs that **simply weren't built with e-bikes in mind**.

Infrastructure Failures: Many e-bike crashes are correlated with **poor road maintenance**. Narrow shoulders, no bike lanes, potholes, and uneven pavement can easily cause a rider traveling at 15 to 20 mph to lose control or be jolted into live traffic.

The Fatal Zones: The most dangerous environments for e-bike riders are **higher-speed arterial roads** without physical separation from traffic. In these settings, collisions with cars and trucks, especially at intersections and on multi-lane roads, are far more likely to result in severe or **fatal e-bike accidents**.

The Vision Factor: It sounds like common sense, but the data is glaring: riders with **uncorrected vision problems** (like nearsightedness without wearing glasses) have a dramatically higher risk of injury. At e-bike speeds, the ability to clearly spot hazards, read traffic, and react to road conditions is non-negotiable.

The Sidewalk Dilemma

This is exactly where the limited practical force of Florida's new legislation comes into play. Senate Bill 382 mandates that e-bikes must drop to **10 mph on sidewalks** when pedestrians are present. While riding on a sidewalk is statistically safer for the rider than sharing a lane with fast-moving cars, the new law makes it clear: **sidewalks are shared spaces**, not speedways. If a child's route forces them to choose between dodging pedestrians on a sidewalk or mixing with 45-mph traffic on a multi-lane road, **that route needs to be changed**.

WHAT TO WATCH FOR

When you vet your child's route, pay special attention to **multi-lane roads**, **high posted speeds**, **blind corners**, **rough pavement**, and **missing bike lanes**. These are the places where a small mistake can have the most devastating consequences.

FAMILY TAKEAWAY

E-bike risk climbs highest on **high-speed multi-lane roads**, at **busy intersections**, and on **rough surfaces** where e-bikes **mix closely** with cars and trucks. Walking or **riding your child's intended route** – and actively nudging them toward **calmer, well-lit streets** with **smoother pavement** and real **separation from fast traffic** – is one of the most concrete, high-impact safety moves a parent can make.

Bottom Line: Safety Starts at the Front Door

E-bikes are not upgraded toys; they are motor vehicles operating in live traffic. While Florida's new legislation is little more than a necessary first step, no law is going to magically protect the child behind the handlebars. The true front-line of defense is your front door.

Especially while Florida lacks the infrastructure, **active parental involvement** – setting hard limits, auditing routes, and enforcing safety gear – is the most immediate way to combat the rising tide of emergency room visits.

Before your child takes their next ride, run through this **final audit**:

'The Non-Negotiable Parent Checklist'

- [ ] **Verify Age and Maturity:**

  According to some pediatric injury studies: the 10 to 13 age bracket is the highest-risk group. Do not hand over a 20-mph machine just because their friends have one. If they don't have the judgment to handle live traffic, they aren't ready for an e-bike.

- [ ] **Audit the Route:**

  Ride or walk their exact path. If it relies on high-speed, multi-lane roads, rough pavement, or blind intersections, map out a safer neighborhood greenway or change the destination entirely.

- [ ] **Make Helmets a Dealbreaker:**

  Skipping a helmet doesn't just make injuries worse; it correlates to a massive spike in crash rates overall. No helmet, no ride. Period.

- [ ] **Ban the Stunts and Screens:**

  "Goofing off," riding broken bikes, and using a smartphone multiply crash risks exponentially. Establish that e-bikes are for transportation, not tricks.

- [ ] **Define "Responsible Riding":**

  Have regular conversations about what it means to be a safe rider. Kids who view themselves as responsible are statistically much less likely to take dangerous risks when you aren't watching.

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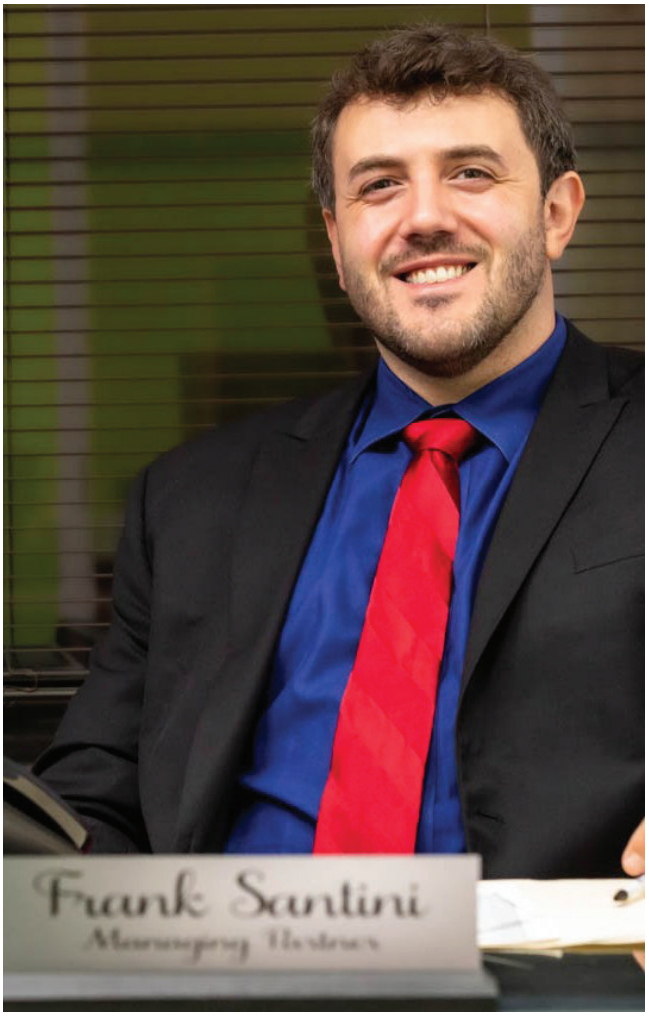

Frank Santini is a personal injury attorney and public safety researcher whose work focuses on accident causation, roadway safety, and emerging transportation risks, as well as toxic chemicals, dangerous products, and medical errors. He is the founder of Santini Personal Injury & Car Accident Law, a firm representing injury victims across Florida, Pennsylvania, and New Jersey in matters involving motor vehicle crashes, commercial trucking collisions, medical malpractice, and other catastrophic injuries. He has earned AV Preeminent distinction for legal ability and ethical standards and was recognized by Super Lawyers as a Rising Star.

Santini is a graduate of Muhlenberg College in Allentown, Pennsylvania, and Stetson University College of Law in Gulfport, Florida, where he graduated first in his class. In addition to litigation, he conducts independent safety research through Santini Research, examining topics such as tractor trailer accidents, e-bike crash risks, and other emerging public safety issues affecting the communities he serves.

His work has been published by the American Bar Association's Law Practice Management Journal. He has appeared in the Tampa Bay Business Journal, Daily Business Review, and Business Observer. He has spoken for such organizations as Florida's Healthcare Engineering Association and Florida's Barclay Group.

Santini is involved with various community and charitable initiatives that support local organizations and families in need. His work bridges legal analysis, public safety research, and community engagement to better understand and communicate the causes of preventable injuries.

Santini lives in Riverview, Florida with his wife and three children.