

THE BEDSIDE BRIEF[©]

E-Bike Trauma Intervention

A 3-Step Guide for Clinicians



Step 1: Validate their Drive for Mastery

Teens don't crash because they like danger and getting hurt; they crash because they're working for Status and Respect.

The Clinical Shift: Don't treat the injury as a "mistake." Treat it as a "technical failure" in their pursuit of mastery and recognition.

What to Say: "I can see you've been pushing the limits of what that bike can do. To ride at that level, your technical skill has to match the machine's physics. Right now, there's a gap between your passion and your expertise with this kind of bike."



Step 2: Introduce the "Physics of a Crash"

Ground the conversation in the Science of Speed to remove any hint of a lecturing tone.

- **The Clinical Shift:** Use the patient's specific injury to explain the Kinetic Energy math.
- **What to Say:** "Your injury was made worse because of Kinetic Energy. When you accelerate from 10 mph to 40 mph, the speed quadruples, but the energy hitting the pavement is 16 times greater. No human bone is designed to win against that much kinetic energy. The solution is finding a path toward Mastery."



Step 3: Pivot the Parent from "Monitor" to "Mentor"

Parents in the ER are often reactive and angry. Help them rewire their approach before they leave the hospital.

- **The Clinical Shift:** Give the parent a prescription for mentorship instead of a lecture on banning bikes.
- **What to Say:** "Your teen is looking for respect through performance — popping wheelies for shout-outs. If you just take the bike away, they'll find another high-risk stage. Instead, I'm giving you this *Conversation Starter* to read. Become their coach. Help them find a sanctioned stage where they can earn those shout-outs and respect safely."



The “Teachable Moment” Checklist

Traditional Approach (Fails)	The Mentor Approach (Works)
Focuses on Danger (Fear-based)	Focuses on Mastery (Status-based)
Uses "Adult Authority"	Uses "Clinical Physics"
Creates a "Safety Lecture"	Creates a "Performance Review"
Labels the teen as "Reckless"	Labels the teen as an "Athlete-in-Training"

The Mentor Approach optimizes clinical intervention by aligning safety guidance with the adolescent patient's neurobiological drive for status and autonomy. While traditional, lecture-based methods often inadvertently trigger a "barrier of mistrust" by framing the clinician as a punitive enforcer, this collaborative model utilizes the neutral, objective language of physics to preserve the patient's dignity. By reframing safety as a standard of technical mastery rather than a set of arbitrary rules, clinicians can bypass defensive triggers and increase the patient's receptivity to critical behavioral changes. Ultimately, this approach transforms the medical encounter into a high-status coaching moment, ensuring that injury-prevention strategies are internalized as professional-grade skills for long-term performance and survival.

The Physics of a Crash

Look at the chart. At 10 MPH, your impact is 1 energy unit. Think of that as a standard 'oops'—maybe like tripping while running. It's manageable.

But look what happens as you add speed. By the time you hit 60 MPH, you're dealing with 36 times the impact of that first fall. Even though you're going 6 times faster, your energy is now 36 times greater.

This amount of energy is more than a human body can handle.

