

Two wheels, one path:

Creating safer streets for a sustainable future



Illustration by Ezra Gilmore

Kaveri Curlin

Dr. Curlin is a May 2025 graduate of the University of California, Irvine School of Medicine, Irvine, CA. She is the recipient of the third place award (tie) in the Alpha Omega Alpha Honor Medical Society 2025 Helen H. Glaser Student Essay Award.

In early July, Dr. Barbara Dietrick Friedes ended her workday as Chief Resident at the Children's Hospital of Philadelphia and hopped on her bicycle to head home. As she approached the intersection of 18th and Spruce streets, a car traveling 60 miles per hour slammed into

the young physician from behind. First responders rushed Dr. Friedes to Jefferson Hospital, but it was too late. Dr. Barbara Dietrick Friedes died at thirty years of age.

Within hours, members of the cycling and medical communities gathered in memoriam and created a shrine dedicated to her memory. News of Dr. Friedes' passing quickly spread over social-networking sites where commenters decried the senselessness of her death and lack of protection for cyclists on shared streets. During an official press conference, the Bicycle Coalition of Philadelphia reminded the city of their decades-long plea to install concrete dividers for bicycle lanes to protect

cyclists like Dr. Friedes. Her family vowed to continue working on bicycling safety initiatives to ensure meaningful change would result from Dr. Friedes' death. Two weeks later, she was laid to rest in Sarasota, Florida.¹

A mere 26 days after Dr. Friedes' tragic and untimely passing, news of similar circumstances rocked the American hockey community. Two NHL players, brothers John and Matthew Gaudreau, were cycling along Country Route 551 in Oldmans Township, New Jersey, while home for a family wedding. A driver, frustrated by the cars slowing to give the cyclists space, attempted to pass on the left only to ricochet from an oncoming vehicle directly into the Gaudreau brothers. Instead of hosting a wedding, the members of the Gaudreau family learned they would be planning two funerals.²

The reckless decisions of two drivers permanently shattered two families, and sent tectonic waves of grief throughout the medical, sports, and cycling communities. While Dr. Friedes died on an urban street after work and the Gaudreau brothers died along a county road outside the city, their fatalities all stem from the same underrecognized epidemic of traffic violence that continues to claim lives. In 2022 the National Highway Traffic Safety Administration reported increasing fatality rates for both cyclists and pedestrians.³ Members of the medical community, as stewards of public health, should understand the violent history behind car-centric culture and use their expertise to advocate for safer streets for all.

American streets reinvented

It is commonly understood that streets are for cars and sidewalks are for pedestrians, whether those streets are in small rural towns or major metropolitan areas. Bicyclists occupy a gray zone between the street and sidewalk, depending on local culture. This bifurcation is a relatively new phenomenon in transit history. At the turn of the 20th century, streets were linear extensions of the city square. Pedestrians, pushcart vendors, and horse-drawn vehicles claimed shared use of the space for business and transit. Other frequent users were urban children who sought refuge from crowded, multigenerational apartments, and used the streets for reprieve and camaraderie.

This delicate ecosystem lasted until the invention of the automobile. As automobiles became more popular as modes of transportation, so too did deadly traffic collisions. Transit historian John Norton estimates

that 210,000 Americans were killed in traffic accidents between 1920 and 1929. The American public was understandably furious, especially because the victims were often children or elderly adults. In 1923, a broad coalition of transit activists in Cincinnati signed a petition to introduce a ballot measure that would require automobile engines to shut off once they reached 25 miles per hour. The motor industry took notice of the proposal and campaigned heavily against its passage. On election day, the measure failed, and motor companies learned a valuable lesson in weaponizing legislation to protect their business interests.

However, the industry still faced a public relations crisis. The motor industry sponsored "safety weeks" featuring bereaved parents whose children were killed in traffic accidents, but those campaigns did little to assuage public sentiment that automobiles—not pedestrians—were responsible for the street carnage. The portmanteau term "jaywalker" became the automobile industry's rallying cry in its battle to evade traffic-injury responsibility. "Jay" was a pejorative term for a country bumpkin ignorant of urban mores. Jaywalkers were even worse: those who ignored their own safety and made the streets more dangerous for everyone. As the term caught on, cities started criminalizing jaywalking, and non-motor entities were all but banished from the road. The car was king; all others—cyclists, trolleys, buses, skaters, and pedestrians—needed to get out of its way.⁴

Bike City, USA

Though automobiles dominate the roads in much of the United States, there are signs of change. In 2022, Bentonville, Arkansas, opened the world's first bikeable building. Visitors to the Ledger, a mixed-use workspace, can experience the breathtaking architecture and rotating art exhibits by cycling up exterior ramps from the first to the sixth floor of the building. Bike commuters who work in the building's private office spaces can take advantage of secure bike storage or rinse off post-commute sweat via on-site showers. The Ledger is just one example of the bicycle-first infrastructure revolution taking place in Northwest Arkansas.⁵

While many metropolitan areas claim to be the biking capital of America, this region of Arkansas is quickly becoming the breakaway favorite. Northwest Arkansas had long been a top-tier destination for mountain-bike enthusiasts thanks to the Ozark Mountains' craggy terrain (Devil's Den State Park celebrated its 35th

Mountain Biking Championship in 2024). Street-cycling opportunities were limited in Arkansas until the 2015 completion of the Razorback Greenway. This 40-mile off-road bike trail connects seven cities and various community attractions, including schools, hospitals, parks, and playgrounds. The Razorback Greenway proved incredibly popular with local residents eager to ditch their car keys. Trailblazers, a nonprofit organization focused on multiuse trail development, estimates that the most well-trafficked portions of the trail host 50,000 visitors a month.^{6,7}

It is perhaps unsurprising that the popularity of the Razorback Greenway increased bicycle use in the region. In 2022, 33.5 percent of Northwest Arkansas residents 18 years or older reported riding a bicycle, compared to 32 percent of the national average. In Bentonville—the nucleus of the Razorback Greenway—50 percent of cyclists reported commute riding as part of their cycling habits.⁸ These changes in Bentonville show that cycling becomes a safer and more popular form of commuting when cities invest in the proper infrastructure. Employees at the Mercy Hospital Northwest Arkansas need only walk one-quarter mile from the hospital entrance to Mercy Trailhead on the Razorback Greenway. Once on the trail, they do not have to worry about competing with vehicles for road space, and can safely share the road with other cyclists, pedestrians, and the occasional white-tailed deer. They do not have to worry about competing with vehicles for road space and are safer because of it. Statewide, Arkansas saw a 31 percent decrease in pedestrian fatalities between 2022 and 2023.

Meanwhile in Pennsylvania, the home of Dr. Friedes before her tragic passing, the pedestrian fatality rate increased by six percent.⁹ The popular mixed-use Razorback Greenway exemplifies how other cities can create and sustain environments safe for non-car entities. Cyclists and pedestrians deserve more protection from automobiles while on shared streets. The medical community should be voicing its support for transit opportunities that prioritize the safety of vulnerable road users.

The built environment

The Razorback Greenway and its accompanying amenities, such as park benches and water fountains, are all examples of the built environment: human-made structures that influence how humans work, play, and gather.¹⁰ This niche concept once used by architects in submitting bid proposals has become crucial in

public health advocacy due to the health effects of ill-conceived design.¹¹

Evidence-based clinical investigations show a strong association between the built environment and physical activity. Currently only 24.2 percent of U.S. adults meet the recommended exercise guidelines of the Centers for Disease Control and Prevention, meaning that most of the U.S. population is at risk of developing preventative diseases and succumbing to premature death due to a stationary lifestyle.^{12,13} One method shown to increase physical activity in this population is to improve the built environment. A 2017 literature review that evaluated 28 studies found investments in streetscape infrastructure, such as sidewalks and protected bike lanes, lead to greater self-reported physical activity over time. Participants also engaged in more moderate to vigorous physical activity compared to demographically matched control groups without improved streetscape infrastructure.¹⁴

These findings corroborate the real-world experience of the many users of the Razorback Greenway in Northwest Arkansas. Streets designed for everyone bring people out of cars and onto the pavement. As Healthy People 2030 and other federal initiatives push for preventative health measures to improve cardiovascular health, clinicians need to have a nuanced understanding of realistic outcomes.¹⁵ Patients are less likely to be physically active when they lack safe spaces in which to exercise. Physical inactivity and a sedentary lifestyle will lead to poorer health outcomes for any patient. Physicians and other members of the care team have a vested interest in mitigating those outcomes, which is only one of the many reasons why the medical community should be advocating for cyclist- and pedestrian-friendly built environments.

Safe(er) streets

Dr. Friedes spent her professional life advocating for the most vulnerable among us. As a pediatrician, she won awards for her dedication to excellence and camaraderie. There is no doubt that generations of children would have flourished and thrived under her care.¹⁶ It is time that the medical community shows up for Dr. Friedes and other victims of traffic violence just like Dr. Friedes would once show up for her young patients every day. Public streets should not be designed for vehicular transit exclusively. The safety of other users, such as cyclists and pedestrians, must be respected.

Municipalities across the U.S. are increasingly creating car-free pedestrian zones to reclaim the streets for shared enjoyment and safety. For example, city planners in Portland, Maine, voted to permanently establish car-free corridors in the popular Old Port District. The creation of pedestrian-only cobblestone lanes was later credited with increasing the accessibility of and investment in the downtown region.¹⁷ Pedestrians in Portland, Maine, or Bentonville, Arkansas, do not have to worry about getting seriously injured or killed by a metal block traveling 60 miles per hour when they step outside. The residents of those cities have great transit options that encourage physical activity to improve population-level health outcomes and prevent disease. Hopefully, the residents of other cities will also be incentivized to walk or bike in safe public spaces designed with their health benefits in mind. Safer streets are healthier streets, and the medical profession should advocate strongly for their creation to stop traffic violence.

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The author's E-mail address is kavicurlin@gmail.com.

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