

People



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# Editorial Patterns in Bicyclist and Pedestrian Crash Reporting

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#### **Abstract**

The World Health Organization characterizes traffic deaths as a preventable health epidemic. Despite the scale of the problem, this issue has not led to a concerted call to action. Why not? The field of media studies offers potential insight. Not only does media coverage help determine which issues merit attention, coverage also shapes how issues are framed. The aim of this paper is to examine local news coverage of vehicle crashes involving someone walking or biking. To that end, this paper used content analysis of 200 local news articles to answer the research questions: (I) How do articles apportion blame between vulnerable road users (VRUs) and drivers?; (2) To what extent do articles frame crashes as a public health issue? The results reveal that local news coverage tends to shift blame toward VRUs and away from drivers. Coverage almost always treats crashes as isolated incidents, obscuring the public health nature of the problem. This pattern of coverage likely contributes to the limited public outcry about pedestrian and bicyclist fatalities. Journalists can counteract these patterns by subtly altering their coverage. Planners can assist these efforts by making their expertise readily available to journalists. These simple changes would help the public identify links between seemingly isolated events and increase public pressure to reduce road deaths.

Traffic crashes cause more than 37,000 deaths annually in the United States and one-fifth of the victims are people walking or biking (1). Worse, pedestrian deaths increased by 46% between 2009 and 2016, and now account for 16% of total U.S. traffic fatalities—the highest rate in the last 30 years (2). Despite the magnitude of the problem, traffic deaths have failed to generate substantial, sustained outrage in the way that other public health crises have. Why is that?

Although there are many explanations for the lack of outrage, the present article focuses on one: local news coverage. The field of media studies explores how media play a central role in shaping public discourse by signaling which topics merit attention (agenda-setting theory) and by influencing how those issues are interpreted (framing theory) (3, 4). News coverage has been shown to affect public perceptions and, in turn, policy making in diverse fields, including climate change, government budgeting, and graduated driver's licensing (5–7).

The purpose of this paper is to examine how local news outlets report car crashes involving pedestrians and bicyclists. The aim is to better understand crash reporting and offer suggestions for improving coverage. Better coverage could help connect seemingly isolated crashes, increase pressure on public officials to address road safety, and ultimately save lives (8, 9).

To assess news coverage, 200 local news articles were systematically analyzed using content analysis. This work focuses on two questions:

- 1. How do articles apportion blame between vulnerable road users (VRUs) and drivers?
- 2. To what extent do articles frame crashes as a public health issue?

The results reveal that local news coverage tends to subtly shift blame away from drivers and toward VRUs. Coverage almost always obscures the public health nature of the problem by treating crashes as isolated incidents, by referring to crashes as accidents, and by failing to include input from planners, engineers, and other road safety experts.

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# **Background**

Media shape public perceptions and policy making through two key pathways: agenda setting and framing. Via agenda setting, the media help determine which issues merit attention (3). The media focus on certain types of stories, like violent crime. These stories tend to have strong positive or negative overtones, have striking visual elements, or affect many people (10, 11). The media also tend to focus disproportionately on rare or surprising events like airplane crashes or terrorist attacks (10, 12, 13). This explains why automobile crashes garner less coverage than plane crashes, even though the former cause many more deaths annually. Finally, the media tend to emphasize stories with "ideal" victims—those who are young or elderly, female, and white (11).

# Framing Crashes in the Media Landscape

Beyond agenda setting, media coverage also shapes public perception by framing stories for the public (14). There are two broad types of frames: episodic framing treats incidents as isolated events, whereas thematic framing seeks to draw connections between them (15). When it comes to traffic crashes, episodic frames treat crashes as isolated incidents and focus on the role of individuals. By contrast, thematic frames draw connections between crashes and focus on broader, institutional factors.

Generally speaking, news coverage tends to eschew thematic framing and instead emphasizes the novelty of stories (11); crash reporting is no exception (16). Two studies of crash reporting, one of television coverage (17) and one of newspaper coverage (18), revealed that most crash reports were episodic and did not mention contributing causes or risk factors.

Coverage that relies on episodic framing is inconsistent with the way that the World Health Organization frames crashes: as a preventable health epidemic (19). The resulting emphasis on individuals rather than institutional actors also conflicts with the Vision Zero approach to traffic safety, which originated in Sweden and has since spread to many North American cities. Vision Zero seeks to shift the burden of road safety responsibility from individual road users to the designers and operators of the transportation system, and is therefore a goal more consistent with thematic framing (20, 21). Although the tendency to emphasize novelty is understandable given the push to maximize readership (or "clicks" on online articles), the failure to include broader risk factors represents a missed opportunity to bring about public health benefits (18).

Referring to a car crash as an "accident" is another missed opportunity for public health benefits. Using the term "accident" to refer to a crash suggests inevitability and faultlessness, but in reality, most so-called accidents are "predictable and preventable" (22, 23). Because of the undue neutrality that the term conveys, the editors of the *British Medical Journal* banned the use of the word "accident" in 2001. However, "accident" is still widespread in popular media and even in the transportation safety literature (e.g., the leading journal, *Accident Analysis & Prevention*).

These seemingly minor editorial patterns have profound effects on public perceptions. The dearth of thematic framing appears to be particularly powerful. Readers who encounter episodic frames tend to hold individuals responsible for negative outcomes and put less pressure on public leaders to make changes (4). Moreover, subtle differences in wording have been shown to shape perceptions of car crashes (24).

Subjects in a pair of experiments viewed films of automobile collisions and answered questions about events occurring in the films. The question "About how fast were the cars going when they smashed into each other?" elicited higher estimates of speed than questions which used the verbs "collided," "bumped," "contacted," or "hit" in place of "smashed." On a retest one week later, subjects who were asked the question with the verb "smashed" were more likely to say "yes" to the question "Did you see any broken glass?", even though broken glass was not present in the film. These results demonstrate the effect of linguistic choices on how people evaluate events and on how word choices can affect memory of events (24).

# Apportioning Blame in a Villain-Victim Storyline

Most journalists rely on episodic framing when they cover car crashes. Within that frame, journalists tend to employ a villain–victim storyline (16). Troublingly, Connor and Wesolowski find that blame is almost always assigned in news articles, whether an investigation has been completed or not (16).

Within the villain-victim storyline, three grammatical tools—focus, agency, and object-based language—often work to shift the balance of blame between VRUs and drivers.

The concept of focus asks: Who (or what) is the center of attention in the sentence? "Dave kicked the ball" focuses on Dave. "The ball got kicked by Dave" focuses on the ball. People tend to place greater blame on the focus of the sentence (25). Although the concept of focus is similar to the active and passive voice, it is more useful for assessing blame. Compare "Stephen punched John" with "John had Stephen punch him." While both sentences use the active voice, the second focuses on John (the victim), thereby shifting blame away from Stephen (the perpetrator).

Another way in which language affects perceived blame is through the concept of agency (26). "Dan broke

Jim's phone" is an example of agentive language, whereas "Jim's phone broke" is a non-agentive way to express the same incident. Sentences without agents are euphemistic; they obscure the actions of the perpetrator (27). By contrast, including an agent presents the perpetrator as an actor with the power to cause harm, reducing victim blaming. The difference between agentive versus non-agentive language profoundly affects how readers perceive blame (26). Remarkably, this effect persists even when those reading the description actually saw the described event transpire. The concept of agency is distinct from the passive and active voice. "Jim's phone was broken by Dan" is passive, but agentive.

The use of object-based language can also subtly shift blame away from drivers. Reports may describe a vehicle doing something rather than a driver ("a car jumped the curb" versus "a driver drove over the curb"). Object-based language obscures the driver's role in the incident, thereby reducing blame. Observers tend to refer to people in cars using "object-based" language (e.g., car, traffic) but typically describe people walking or using bicycles with "human-based" language (e.g., bicyclist, pedestrian, person) (28). This practice assigns unequal agency among the two groups.

Beyond sentence-level grammatical choices, articles can also shift blame toward victims using counterfactual statements. These statements imply that the victim could have avoided injury/death if they had acted differently (29). Readers tend to place more blame on victims when the description of the incident includes counterfactual language (30).

#### Media Studies and VRUs

A small number of extant or in-progress studies, though limited in scope, have begun to document the ways in which linguistic, grammatical, and editorial practices portray the nature of VRU injuries and deaths in media. One effort applied discourse and content analysis to news article titles in a Canadian city over the period of a year, documenting a strong pattern of victim blaming (31). Preliminary results from a study underway at the time of this writing, this time focusing on a county in Florida, suggest a tendency to remove blame from motorists and highlight the actions of bicyclists in crashes (32). The authors note that this tendency strengthens the perception that the bicyclist is responsible in these situations, diminishing the chances of social policy reform that might help to reduce injuries and fatalities.

## **Method**

## Data

The method for this research was content analysis, which is the systematic effort to classify textual materials (33).

The texts analyzed here are local news reports of crashes involving pedestrians or cyclists published in the United States during February and March 2018. During this time period, an automated script was run daily, using a news aggregator to seek articles covering pedestrian and bicyclist crashes with any combination of the search terms "bicycle," "bike," "cyclist," "bicyclist," "pedestrian," and "walking" and the terms "accident," "crash," "struck," "hit," and "killed." The resulting articles came from a variety of news sources, mostly local newspapers and television stations, and originated in cities and towns all around the United States.

A sample of 200 articles was sought, 100 featuring a crash with someone walking and 100 with someone biking. During the period of February 2018 to March 2018, a corpus of 4,134 articles was collected. This then underwent systematic exclusion of irrelevant articles, duplicates, and international articles, leaving a sample of 440 relevant articles. From the cleaned corpus, the first 100 articles about pedestrians and bicyclists, respectively, were selected.

# **Content Analysis**

A coding instrument was developed to guide coders in systematically capturing relevant information. Although some nuance was lost in the coding process, this method is consistent and minimizes the influence of the coders' personal sensibilities.

The first version of the coding guide was based on the media studies literature and on an initial review of 20 news articles. Then all four members of the research team coded 30 articles in common. Results were compared, and revisions were made to the coding instrument to maximize consistency across raters. The final instrument was then used to code each of the 200 articles in the sample.

## Measuring Blame

Blame was measured at the sentence level using focus, agency, and the use of object- versus person-based language. In addition, a sentence typology was developed to measure all three of these components with a single value (see Table 1). The typology helps illustrate the cumulative effect of these three editorial choices. Compare, for instance, the emotional impact of Type 1 ("A car hit a VRU."), Type 2 ("A driver hit a VRU."), and Type 5 ("A VRU was hit.").

Sentence types for the titles and body text were measured separately. In body text, only sentences that described the incident were included. Sentences that described health outcomes for the victim—which were almost always Type 5—were excluded. The denominator

Table I.	Sentence	Types
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Туре	Agency	Focus	Refers to	Examples
I	Agentive	Auto	Vehicle	A car hit a VRU.
2	Agentive	Auto	Driver	A driver hit a VRU.
3	Agentive	VRU	Vehicle	A VRU was hit by a car.
4	Agentive	VRU	Driver	A VRU was hit by a driver.
5	Non-agentive	VRU	Not applicable	A VRU was hit.
6	Non-agentive	Auto and VRU	Vehicle	A VRU and car collided.
7	Non-agentive	Auto and VRU	Driver	A driver and a VRU collided.
8	Non-agentive	Auto	Vehicle	A car was in a crash.
9	Non-agentive	Auto	Driver	A driver was in a crash.

for the sentence-level analysis is the number of sentences (n=416) rather than the number of articles (n=200). A limited number of titles did not fit the typology (9%). Some omitted a verb (e.g., "One dead in car-bicycle accident") and others focused on the investigation, announced road closures, or offered details about the victim rather than describing the incident.

Blame was also measured by counting counterfactuals. Repeat mentions of a counterfactual were recorded separately. The type of counterfactual was also noted, including being under the influence of drugs or alcohol, acting erratically (e.g., "swerving" or "darting"), and crossing against a signal or outside a marked crosswalk.

## Measuring Public Health Framing

Public health framing was measured in several ways. First, coders categorized the overall framing of each article as either thematic or episodic. Second, coders noted how often thematic elements were mentioned (e.g., the number of crashes in the area, Vision Zero, road design, or any methods of reducing crashes). Third, coders noted how articles referred to the incident (e.g., as an accident, a crash, a collision, etc.). Finally, coders tracked how often articles included information from a planner, engineer, or other expert who could contextualize a crash more holistically than a police officer.

## Assessing Inter-Rater Reliability

Inter-rater reliability (IRR) was evaluated through two measures: percentage agreement and Krippendorff's alpha. The percentage agreement of coders' ratings is a straightforward, first-pass measure of reliability. Krippendorff's alpha can be applied to data at all levels of measurement and across any number of coders, yielding a single statistical measure to indicate the reliability of the data (34). The highest value of alpha is 1 (perfect agreement), and an alpha of 0 indicates a level of agreement equivalent to what would be expected by chance. It

is possible to yield negative values of alpha if there is less agreement among coders than would be expected by chance.

A total of 24 articles (12% of the sample) were randomly selected to be rated by all four coders to evaluate IRR. The decision was made to evaluate the IRR of title sentence type, body text sentence types, article framing, traffic delay emphasis, and the presence of counterfactual statements, given their importance in the subsequent analysis.

Most of the items had agreement percentages higher than 90%. Over half of the items had a Krippendorff's alpha value of 1 and another one-eighth exceed 0.666, a minimum threshold value that indicates tentative reliability. The remaining one-third of items had low or even negative alpha values, suggesting that they are unreliable for analysis. However, closer inspection of the ratings for these items indicated that, in most cases, the low alpha value was because of the rarity of the item in the sample of IRR articles, a known weakness for IRR metrics (35). Nevertheless, sentence Type 5 in the title and body text and the presence of a counterfactual statement all had low IRR that cannot be attributed to rarity, and consequently analysis of these items should be viewed with caution.

#### Caveats

Before proceeding to the results, a few caveats deserve to be mentioned. First, this work is descriptive in nature. This fact reflects the aim of the work: to systematically describe patterns of traffic crash reporting rather than to draw causal inferences. Further iterations of this work could explore formal hypotheses. Second, the corpus of crashes includes just 200 of the thousands of articles written each year. It is possible that the corpus is not representative of local news coverage in the United States. Moreover, coverage in some locations—or at some news sources—may differ meaningfully from the results presented here. Exploring variation in coverage quality is an excellent avenue for future research.

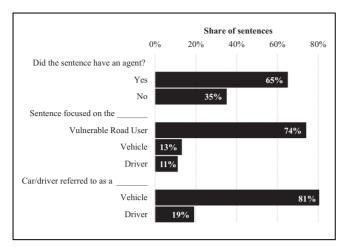


Figure 1. Prevalence of blame-attributing language elements across all incident-describing sentences.

### Results

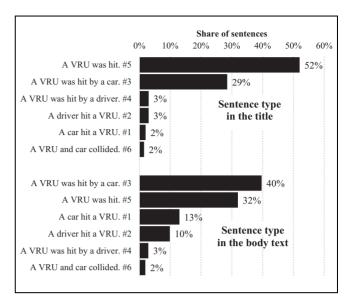
This document refers to several example sentences from the articles in the sample corpus. These are presented as inset quotes, preceded by a corpus ID number.

# Assigning Blame

Focus, Agency, and Object-Based Language. Figure 1 reveals how crash coverage apportions blame via agency, focus, and object-based language. One-third of sentences describing crashes lacked an agent entirely. In the 65% of sentences that did include an agent, VRUs were the focus 74% of the time. By contrast, only 13% of agentive sentences focused on the automobile and only 11% focused on the driver. Sentences also overwhelmingly used object-based language to refer to drivers or vehicles. When a driver or vehicle was mentioned at all, the sentence used object-based language (e.g., "A car hit a VRU.") 81% of the time and used person-based language (e.g., "A driver hit a VRU.") just 19% of the time. In other words, sentences overwhelmingly referred to an inanimate object as the actor rather than a driver. In fact, 27% of the time, the driver was not mentioned anywhere in the article. The use of object-based language was particularly jarring in the case of hit-and-run collisions where "the vehicle drove away."

Sentence Types. Figure 2 presents the results of the sentence type analysis, which explores how focus, agency, and object-based language combine to shift blame away from drivers. Of the sentence types analyzed here, only four occurred with any frequency.

When describing crashes, journalists relied most frequently on sentence Type 5 ("A VRU was hit."). This



**Figure 2.** Prevalence of sentence types across body text and titles.

type was used in half of the titles and a third of the body text sentences. In Type 5 sentences, a crash "just happened" to the VRU. Not only do these sentences focus on the VRU, they also omit the driver and the vehicle entirely. Together, these patterns shift blame away from the driver and toward the VRU.

Journalists also relied heavily on sentence Type 3 ("A VRU was hit by a car.") This type comprised 29% of titles and 40% of body text sentences. For example:

#312: "A bicyclist suffered major injuries when she was hit by a car in Imperial Beach Saturday evening, sheriff's officials said."

Though agentive, Type 3 sentences shift blame away from the driver in two ways. First, they use object-based language to grant agency to the vehicle rather than the driver. Notably, Type 4 sentences—which differ from Type 3 in that they refer to the driver rather than the vehicle—occur extremely rarely (just 3% of the time). Second, Type 3 sentences shift blame away from drivers by making the VRU the star of the show. Some examples of this misplaced focus are particularly egregious:

#4: "The victim fell into the street after being hit by the first car, and was then struck by a second passing vehicle, pinning him underneath."

Type 1 sentences ("A car hit a VRU.") were the third most common in the body text (13%). These occurred roughly a fourth as often as Type 3 sentences and a third as often as Type 5 sentences. One example:

#312: "As the eastbound cyclists crossed Fourth Street, a vehicle that was turning left from Palm hit one of the riders."

While Type 1 sentences assign more blame to the driver than either of the previous examples, they still shift blame away from the driver by using object-based language, making the car the actor rather than the driver.

It is not until the fourth most common type—Type 2 ("A driver hit a VRU.")—that the driver is mentioned. Consider the following:

#54: "Authorities say an SUV <u>driver</u> fell asleep and fatally struck a pedestrian who was walking to a bus stop."

Unlike the previous examples, Type 2 sentences assign both agency and focus to the driver. Type 2 sentences were relatively rare; they occurred only 10% of the time.

Counterfactuals. The final means of attributing blame is with the use of counterfactual statements, which were present in one-third of the articles analyzed. The most common counterfactual was that the victim was "jay-walking" or crossing outside a crosswalk at the time of the crash. Another common counterfactual was that a VRU was traveling "in the roadway." In some cases, sidewalks and crosswalks were unavailable, but articles in the sample almost never mentioned these contextualizing facts.

Many articles mentioned that the VRU "darted" into the street or otherwise stepped in front of a moving vehicle. Although some VRUs certainly do dart into the street, statements like these should be read skeptically because of survivor's bias (i.e., relying exclusively on the account of someone who survived the crash). Concerns about survivor's bias are less pressing if the information came from a witness, as in the example below:

#83: "Witnesses tell police the victim was struck after he darted into the path of a GMC Yukon."

Finally, a small proportion of articles mentioned the absence of protective equipment, for instance:

#352: "The bicycle rider had neither lights nor reflectors on his bike and police say that stretch of Nogolitos is very dark at night."

Two percent of counterfactuals mentioned that the victim was wearing dark clothing, 8% (of bicycle counterfactuals) mentioned a lack of helmet, and 3% mentioned a lack of other safety equipment.

Some particularly industrious articles included multiple counterfactuals in a single sentence: #59: "The pedestrian was not in a crosswalk, he was wearing dark clothing and it was raining, CMPD said."

The problem with counterfactuals is not that they are inaccurate. Instead, the problem lies in the undue focus on the actions of the VRU. By including some facts (such as the victim wearing dark clothing), but not others (such as the speed of the vehicle or the characteristics of the road design), news coverage tends to shift blame toward VRUs. Despite occurring in a small proportion of articles, counterfactuals have been shown via controlled experiments to have a powerful effect on readers' perceptions of blame, making them more likely to blame the victim (29, 30).

# **Public Health Framing**

Thematic Framing. We turn now to public health framing. As expected, most local news articles described crashes as isolated events. Only 6% of articles were primarily thematic in their framing. These articles described crash rates, emphasized links between multiple crashes, and contextualized crashes by describing the roadway in detail.

In total, 16% of articles included one or more thematic elements. The most frequently used thematic element was the number of crashes in the area (used in 8% of articles). At times, statistics were used appropriately to contextualize the crash:

#74: "A national report released earlier this month found Arizona has the highest rate of pedestrian deaths in traffic accidents in the country, based on data from 2017."

More often, however, articles simply reported the number of crashes and failed to meaningfully connect the incidents. Worse, some articles explicitly denied links between crashes. In one instance, a police chief explained that two recent fatal crashes were not related. In a more egregious example, a police spokesperson denied any connection between five VRU crashes in the space of a single month. These denials miss a common thread between many crashes: dangerous road design (36–38).

On rare occasions, articles employed public health framing effectively by placing considerable focus on road design. For example, consider the article entitled:

#280: "Boy struck in hit-and-run uninjured, but road's safety called into question."

The author of this piece interviewed neighborhood residents who described a pattern of high-speed vehicles moving through the area and outlined specific recommendations to improve safety:

#280: "[The resident] hopes to see some changes—like speed bumps or increased police presence in the neighborhood—before someone is seriously hurt."

Articles like these help readers understand that road design contributes to crashes, and—most importantly—that road design can be changed to improve safety. Unfortunately, articles mentioned road design only rarely (7% of articles). Those that did typically mentioned road design only in passing rather than discussing what makes it dangerous or what might be done to fix it. Articles almost never mentioned road design to better contextualize counterfactual statements. For instance, not a single article mentioned the distance to the nearest crosswalk when explaining that someone was hit "outside a marked crosswalk." Nor did any of the articles mention that an area lacked sidewalks when they reported that the VRU was traveling in the roadway.

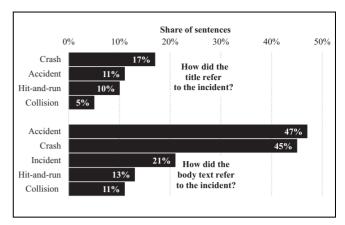
Accident. Figure 3 reveals that "accident" was the most commonly used term for referring to crashes, representing 47% of body text sentences and 11% of titles. The term obscures the preventable nature of crashes. The use of the term "accident" was particularly jarring when the driver was charged with one or more crimes or was arrested, as was the case in a few examples.

Quoting Experts. Finally, not one of the 200 articles reviewed included a quote or statement from an urban planner, traffic engineer, or other expert. Instead, information about crashes came almost exclusively from police officers. This is problematic because most police officers are not trained to consider the complex factors that contribute to a crash. Consider, for instance, the officer who claimed that "speed was not a factor" in a crash (#342). Traffic safety advocates would oppose this characterization because a pedestrian's chances of dying in a collision increase dramatically with vehicle speed (39). The officer almost certainly meant that "speeding" was not a factor.

#### Discussion

This work revealed that local news coverage subtly, but consistently, blames VRUs for crashes. Moreover, rather than addressing commonalities between crashes, coverage almost always treated crashes as isolated incidents.

There is no reason to believe that journalists are trying to victimize VRUs. Rather, three factors combine to explain current editorial patterns. First, news media sources have hemorrhaged employees in recent years, particularly seasoned employees with the wherewithal and institutional knowledge to write more nuanced coverage (40, 41). As a result, most local news—and



**Figure 3.** Prevalence of framing elements across sampled articles.

therefore crash coverage—is written by young reporters on short deadlines with few resources and limited guidance. Journalists draw heavily from police reports when drafting their coverage because they are pressed for time. Second, police are trained to avoid ascribing blame to people when they have not been charged with a crime. When it comes to crashes, this pattern of "cop-talk" prevents officers from implicating drivers unless they are officially charged, which rarely happens. Third, personal experience can bias perceptions of travel behaviors (42). If journalists are more likely to drive than walk or bike, they may sympathize more readily with drivers in the aftermath of a crash.

Despite these issues, there are relatively simple steps that could be taken to improve crash coverage (9, 43). Most importantly, journalists should be aware of how grammatical choices shape perceived blameworthiness and they should consciously counteract the natural tendency to blame the victim. Specifically, journalists should avoid attributing blame to inanimate objects, particularly in the case of hit-and-runs. When in doubt, try replacing "vehicle" with "hammer," as in "A hammer struck a pedestrian." If the resulting sentence sounds ridiculous, revise. Journalists should also avoid making VRUs the focus of most of the sentences describing the incident because this practice shifts blame to the VRU. Instead, they should use a wider variety of sentence types and occasionally make the driver (or if necessary, the vehicle) the focus and the agent. Journalists should use counterfactual statements judiciously, particularly if the information comes exclusively from the driver. If counterfactual statements are included, journalists should contextualize them by describing the location and by noting whether crosswalks and sidewalks were actually available.

Journalists should also move beyond the villainvictim storyline, and frame crashes with a public health focus. Specifically, journalists should contextualize the most recent crash by providing data on the number of crashes, fatalities, and injuries that have taken place locally and nationally. Journalists should avoid the term "accident," which obscures the preventable nature of the incident, and use "crash," "collision," or some other term. Journalists should also reach out to planners, traffic engineers, safety advocates, and other experts to contribute to crash articles.

Planners and other practitioners have a role to play as well. They should not assume that journalists have the resources to seek them out and should make their expertise readily available. Even before a crash takes place, local planners should consider preparing a formal statement such as the following:

While I am unfamiliar with the details of this specific crash, I can say that this is not an isolated incident. Today's crash is just the most recent in an epidemic of crashes that claims the lives of thousands of Americans each year. To meaningfully reduce traffic fatalities, we need to address the common denominator: road design. The U.S. road network tends to prioritize vehicle speed and flow at the expense of all other road users. We can save lives, like the life of [victim's name], by making common-sense changes to our road network.

Such a statement is a starting point, and should be adapted to fit individual circumstances. For instance, if possible, the statement should further contextualize the crash using local statistics. Furthermore, the statement should point to specific actions that could be taken (or are being taken) to reduce road deaths locally, such as lowering speed limits, increasing traffic enforcement, or changing street design.

Simple improvements like these can help the public draw connections between seemingly disparate crashes, increase pressure for institutional-level changes, and save lives. Promisingly, evidence suggests that small changes to coverage can improve outcomes. For example, news coverage that conveys preventive information has been shown to positively affect behavior (44) and stories about targeted enforcement of speeding, distracted driving, and impaired driving have been shown to increase awareness of—and support for—those efforts (45).

#### **Author Contributions**

The authors confirm contribution to the paper as follows: study conception and design: K. Ralph, E. Iacobucci, C. Thigpen, T. Goddard; data collection: K. Ralph, E. Iacobucci, C. Thigpen, T. Goddard; analysis and interpretation of results: K. Ralph, E. Iacobucci, C. Thigpen, T. Goddard; draft manuscript preparation: K. Ralph, E. Iacobucci, C. Thigpen, T. Goddard. Felicity Owens at Texas A&M University provided an additional review of background literature. All authors reviewed the results and approved the final version of the manuscript.

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