



Status Summary 2023: Road Safety Risk Factors

Bloomberg Philanthropies Initiative for Global Road Safety

ACCRA, GHANA



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

International
Injury Research Unit

Beginning in 2015, the Johns Hopkins International Injury Research Unit, through the Bloomberg Philanthropies Initiative for Global Road Safety, has been conducting observations in Accra to reduce road injuries and fatalities.

The following report highlights results from an ongoing study that captured observations of speed as a risk factor.* The results are based on data collected between November 2020 and October 2023.

*The study observed helmet use and seat-belt and child restraint use and shared the findings in the 2022 Status Summary Report.

Speeding among all observed vehicles was very high



Speeding was highest among motorcycles



Speeding was most common on weekends

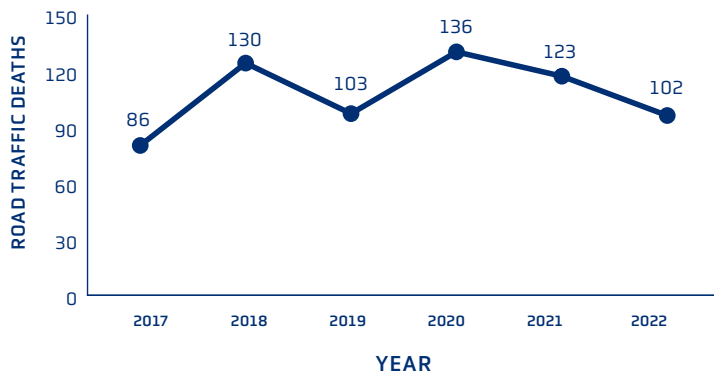


The mean speed among speeding motorcycles was high

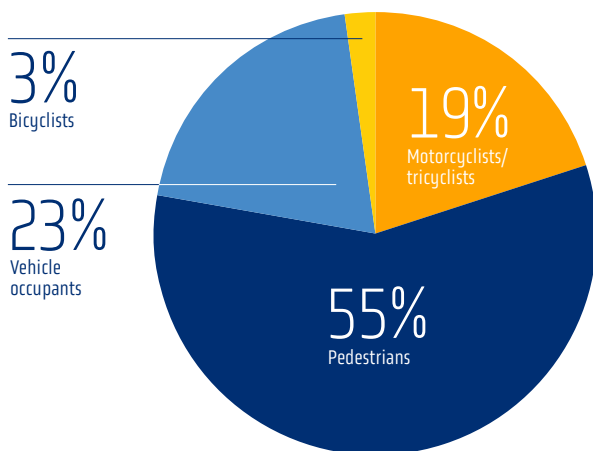


Road Traffic Fatalities in Accra

Road traffic deaths have decreased since 2020



Deaths by road user, 2022



Vulnerable road users (pedestrians, motorcyclists/tricyclists, and bicyclists) accounted for 77% of the reported road traffic fatalities in 2022.

Note: Data from police crash reports was used for the outcome data indicators. Police crash data are prone to underreporting.

Recommendations

Motor Traffic and Transport Department, Ghana Police Service, and Ghana Highway Authority

- Enhance enforcement of speed limits with a focus on:
 - Motorcycles.
 - Arterial roads.

City of Accra, Department of Urban Roads, and Ghana Highway Authority

- Implement a maximum speed limit of 30 km/h on roadways in designated areas where motorized traffic mixes with pedestrians and bicyclists, and 50 km/h in urban areas.

City of Accra, Accra Metropolitan Assembly, Ghana Highway Authority, and National Road Safety Authority

- Coordinate mass-media campaigns with enforcement efforts, focusing on:
 - Speed reduction and consequences of speeding, particularly among motorcyclists, aligned with the messaging of the January 2023 mass-media campaigns.

Speed in Accra

Higher speeds lead to a greater risk of a crash and a higher probability of serious injury. An increase of 1 km/h in average vehicle speed results in an increase of 3% in the incidence of crashes resulting in injury and an increase of 4%–5% in the incidence of fatal crashes.*

*World Health Organization. (2017). *Save LIVES: A road safety technical package*. Geneva.



Speeding among all observed vehicles was very high (47%).



Speeding was more frequently observed among motorcycles (54%) and light vehicles (47%) compared with heavy vehicles (25%).



Speeding was higher over weekends (53%) compared with weekdays (44%).



Vehicles were observed speeding more frequently on arterial roads (54%) compared with local and collector roads (36%).



Applying the global recommendation of 30 km/h for local and collector roads, 92% of the observed vehicles were traveling at unsafe speeds.**

Functional classification of roads

Arterial roads: These are roadways with high traffic volume; they provide a high degree of mobility and carry a high proportion of travel for long distance trips. These roadways carry the major portion of trips entering and leaving an activity center, as well as the majority of movements that either go directly or bypass the area.

Collector roads: These roads collect traffic from local roads and connect to arterial roadways. They penetrate neighborhoods and communities, collecting and distributing traffic between neighborhoods and arterial roads. Collector roads are shorter than arterial but longer than local roads.

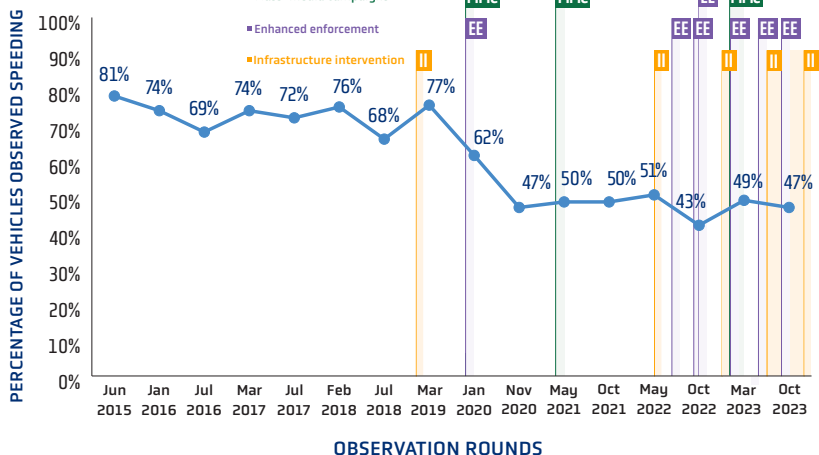
These roads provide less mobility than arterials at lower speeds and for shorter distances.

Local roads: These roads provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas.

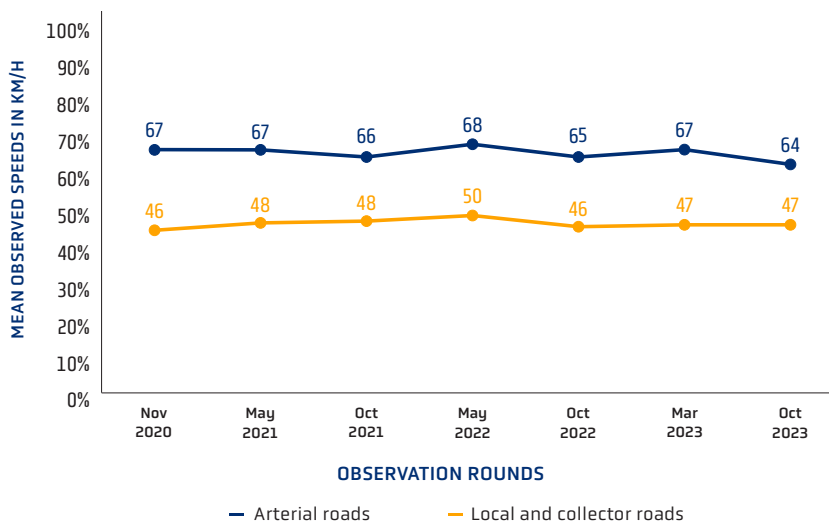
** The speed limit in Accra is 80km/h for some arterial roads and 50km/h for all other roads.

Key Findings on Speed in Accra

In 2023, speeding decreased in Accra showing the effectiveness of the continued enforcement and mass-media campaigns.



Focus speed enforcement efforts on arterial roads



Recommendations

Motor Traffic and Transport Department, Ghana Police Service, and Ghana Highway Authority

- Enhance enforcement of speed limits, focusing on:
 - Motorcycles.
 - All roads.
 - Weekends.

City of Accra, Department of Urban Roads, and Ghana Highway Authority

- Implement a maximum speed limit of 30 km/h on roadways in designated areas where motorized traffic mixes with pedestrians and bicyclists, and 50 km/h in urban areas.
- Implement traffic-calming measures, such as bumps, rumble strips, safe speed signage, and designation of low-speed areas to protect vulnerable road users.

City of Accra, Accra Metropolitan Assembly, Ghana Highway Authority, and National Road Safety Authority

- Coordinate mass-media campaigns with enforcement efforts, focusing on:
 - Speed reduction and consequences of speeding, particularly among motorcyclists, aligned with the messaging of the January 2023 mass-media campaigns.
- Monitor and evaluate all enforcement activities and existing mass-media campaigns to assess their continuous effectiveness.

Speeding in African Cities (2023)

Guidance notes:

Prevalence: The % of speeding from the latest round of observational data on speeding.

Mean speed: Mean and standard deviation of speed in km/h from the latest round of observational data on speeding.

Median speed: Median speed in km/h from the latest round of observational data on speeding.

% change: Magnitude and direction of change in the prevalence of speeding between the last two rounds.

Speeding: The arrow indicates the change in direction between the last two rounds of speed observations.

Kumasi

Prevalence: 35%

Mean speed: 64 (± 12) km/h

Median speed: 60 km/h

% change: 17% increase

Speeding \uparrow

Accra

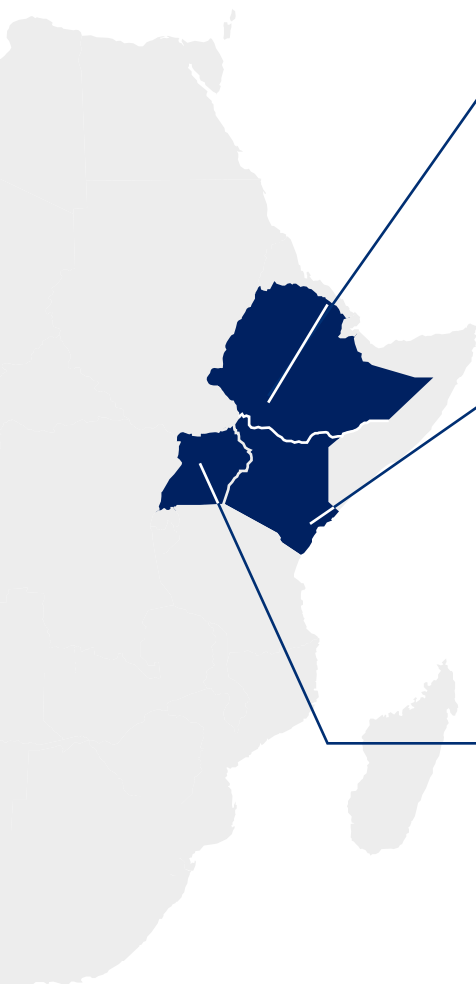
Prevalence: 47%

Mean speed: 70 (± 14) km/h

Median speed: 68 km/h

% change: 4% decrease

Speeding \downarrow



Addis Ababa

Prevalence: 52%
Mean speed: 58 (± 15) km/h
Median speed: 58 km/h
% change: 2% increase
Speeding \uparrow

Mombasa

Prevalence: 26%
Mean speed: 58 (± 7) km/h
Median speed: 56 km/h
% change: 4% decrease
Speeding \downarrow

Kampala

Prevalence: 5%
Mean speed: 57 (± 6) km/h
Median speed: 55 km/h
% change: 17% decrease
Speeding \downarrow

Speed among Motorcycles in Accra

Globally, around 30% of all road crash deaths involve powered two- and three-wheeled vehicles.¹ Powered two-wheelers or motorcycles are a dominant mode of transportation in low- and middle-income countries, including within the African region.^{1,2} This is because of their compact size, fuel efficiency, and easy maneuvering during traffic congestion.² However, data on motorcycle use and speeding trends in a specific city is limited.

1 World Health Organization. (2022, October 10). New global guidelines to curb motorcycle crash deaths. Retrieved from <https://www.who.int/news/item/10-10-2022-new-global-guidelines-to-curb-motorcycle-crash-deaths>.

2 Ospina-Mateus, H., Quintana Jiménez, L. A., Lopez-Valdes, F. J., & Salas-Navarro, K. (2019). Bibliometric analysis in motorcycle accident research: A global overview. *Scientometrics*, 121(2), 793–815.



Of all motorcycles observed, 54% were observed exceeding the posted speed limit.



The mean speed among speeding motorcycles was high (59 km/h).



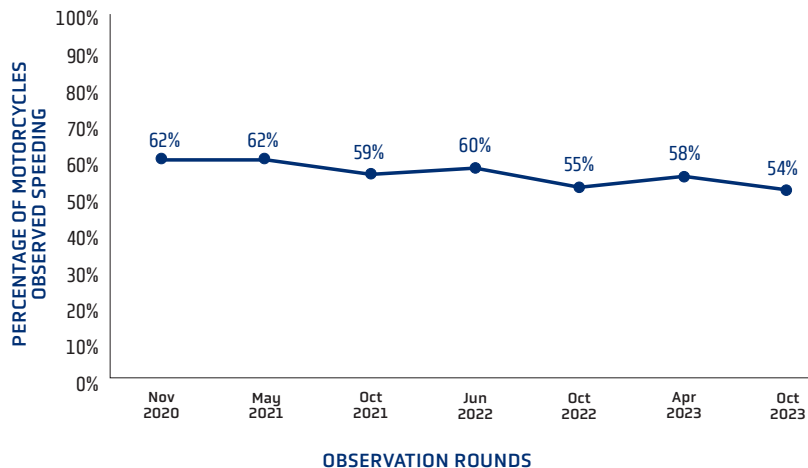
Speeding among motorcycles was more common on weekends (59%) compared with weekdays (52%).



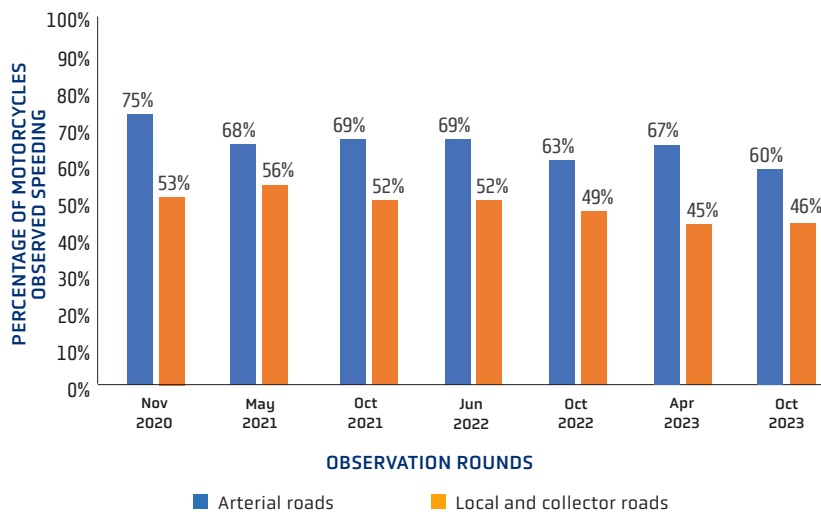
Over 48% of the motorcycles observed speeding were traveling >15 km/h above the posted speed limit.

Key Findings on Speed Among Motorcycles in Accra

Despite the decrease, speeding among motorcycles remains very high



Motorcycle speeding was more common on arterial roads compared with local and collector roads



*Traffic calming measures for four-wheeled vehicles are hazardous for motorcyclists. Speed control measures therefore need to allow motorcyclists to navigate the traffic calming measure safely. Ref: World Health Organization. [2022]. *Powered two- and three-wheeler safety: A road safety manual for decision-makers and practitioners* (2nd ed.). Geneva.

Recommendations

Motor Traffic and Transport Department, Ghana Police Service, and Ghana Highway Authority

- Enhance enforcement of motorcycle speed limits with a focus on:
 - Weekends.
 - Arterial roads.
- Enforce the use of reflective clothing by motorcyclists to avoid “looked-but-failed-to-see” crashes where car drivers misjudge the approaching speed of motorcycles.
- Make enforcement operations regular, visible, and widespread.

City of Accra, Department of Urban Roads, and Ghana Highway Authority

- Implement low-speed zones for motorcycles in urban areas.*
- Implement infrastructure and road design interventions to reduce speed and prevent motorcyclist injuries and fatalities, such as exclusive motorcycle lanes, horizontal markings on the road with adequate grip or skid resistance, divergence markings, and lane-based motorcycle waiting zones at intersections.

City of Accra, Accra Metropolitan Assembly, Ghana Highway Authority, and National Road Safety Authority

- Implement mass-media campaigns in coordination with enforcement efforts, focusing on the dangers of speeding, especially among male motorcycle drivers.

Ghana police using a laser gun to conduct speed enforcement in Accra, Ghana.



METHODS

Since 2015, the Johns Hopkins International Injury Research Unit has partnered with the Council for Scientific and Industrial Research–Building and Road Research Institute (CSIR–BRRI), Ghana to conduct roadside observations. The methods for these findings were developed by the Johns Hopkins International Injury Research Unit and implemented in collaboration with the CSIR–BRRI. This report provides results from twice–a–year cross–sectional observational surveys that represent population–level [citywide] prevalence of speed as an important road safety risk factor, to show changes over time. Across the seven rounds of observations made in the current phase, over 470,000 observations have been made for speed.

Observation sites were randomly selected, conditional on the safety of observers. There were 15 observation sites for speed, and a standardized protocol was used with vehicles selected for observation in a systematic quasi–random fixed sequence. Observations were performed between 7:30 a.m. and 7:00 p.m. on both weekdays and

weekend days. The methods were designed to estimate citywide prevalence and cannot provide insights into interventions conducted in specific locations in the city. The regional team and data management team at Johns Hopkins International Injury Research Unit reviewed and cleaned the data to perform the analyses available in this report.

ACKNOWLEDGMENTS

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