



# Status Summary 2023: Road Safety Risk Factors

Bloomberg Philanthropies Initiative for Global Road Safety

Quần đảo Hoàng Sa

**H O C H I M I N H C I T Y ,  
V I E T N A M**

Quần đảo Trường Sa



**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 conducted observations in Ho Chi Minh City to reduce road injuries and fatalities.

The following report highlights results based on an ongoing study that captured observations of three risk factors:\* speed, helmet use, and seat-belt and child restraint use. The results are based on data collected between July 2015 and August 2023.

\*This study did not observe drink driving.

**Speeding was high among all observed vehicles**



**Speeding prevalence is highest in motorcycles accounting for**



of the total observed motorcycles.

**Correct helmet use among all motorcyclists was low**



**Seat-belt use among rear-seat passengers was low**



**Child restraint use was rare at**



for passengers younger than 12 years old of age.

# Road Traffic Fatalities and Injuries in Ho Chi Minh City

2016-2022

805  
2016

717  
2017

691  
2018

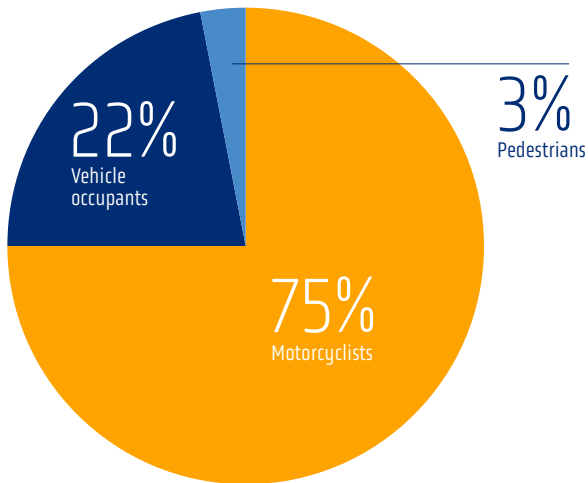
656  
2019

560  
2020

474  
2021

620  
2022

Deaths by road user, 2020



**Vulnerable road users (pedestrians, motorcyclists, and cyclists) accounted for for eight out of 10 reported road traffic fatalities in 2021.**

Note: Data from existing sources was used for the outcome data indicators. Police crash data systems are prone to underreporting.

## Recommendations

### *Ho Chi Minh City Traffic Police and Other Law Enforcement Agencies*

- Implement targeted speed enforcement with a focus on motorcyclists.
- Enhance enforcement of:
  - Helmet use among all motorcyclists, with a focus on proper strapping.
  - Seat-belt use among passengers, along with child restraint use.

### *Ho Chi Minh City Traffic Safety Committee (TSC), Ho Chi Minh City Department of Transportation and Public Works (DOT), and The Transportation Works Construction Investment Project Management Authority of HCMC (TCIP)*

- Advocate to enact a national child restraint law in line with global best practices.
- Coordinate mass-media campaigns with enhanced enforcement efforts.
- Implement infrastructure and road design interventions to reduce speed and protect vulnerable road users.

# Speed in Ho Chi Minh City

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.\*

\*Save Lives: A road safety technical package. Geneva: World Health Organization; 2017.



**Speeding prevalence increased from 7% in December 2020 to 12% in August 2023.**



**Motorcyclists consistently exceeded the posted speed limit more frequently than other vehicles.**



**Speeding was more frequently observed on collector/local roads (18%) than on arterial roads (6%) or expressways (4%).**

## Functional classification of roads

**Expressway:** These are six- to eight-lane controlled-access highways with modern features, such as access ramps, grade separation, lane dividers, and elevated sections.

**Arterial road:** 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 through or bypass the area.

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

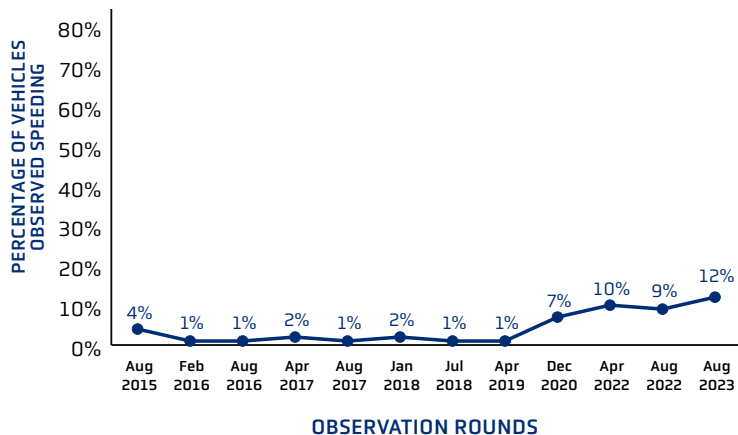
**Collector road:** These roads collect traffic from local roads and connect to arterial roadways. They penetrate neighborhoods and communities, collecting and distributing traffic between neighborhoods and arterial roads. Collector roads are shorter than arterial but longer than local roads.

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

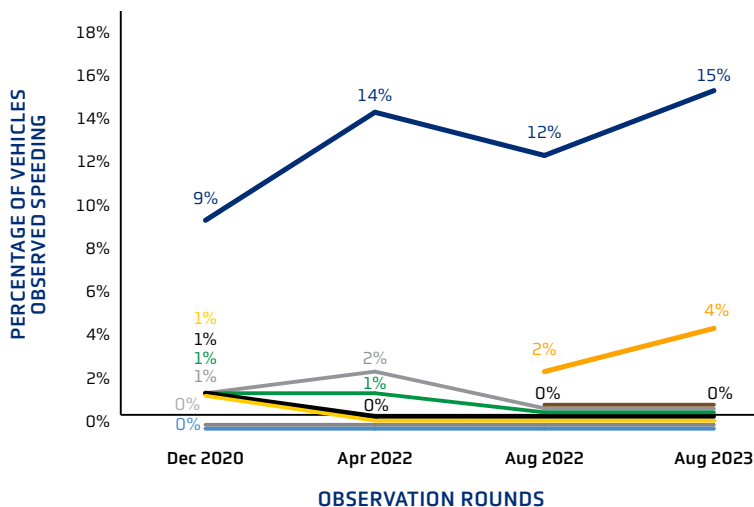
Note: These are not terms used in legislation in Vietnam but are descriptions based on typologies outlined in the World Health Organization's best practices for road safety.

# Key Findings on Speed in Ho Chi Minh City

Speeding was observed increasing between April 2019 and August 2023



Speeding among motorcycles and three-wheelers was observed increasing between 2020 and 2023



- Motorcycles
- Three-wheelers
- Minibuses/minivans
- Truck/large trucks
- Pickup/light trucks
- Buses
- Sedans/saloons
- SUVs
- Other

Note 1: Category "three-wheelers" was added to collect for vehicle type after April 2022.

Note 2: Category "Sedans/Saloons" and "SUVs" were further disaggregated for data collection after April 2022.

## Recommendations

### Ho Chi Minh City Traffic Police and Other Law Enforcement Agencies

- Enhance enforcement of:
  - Speed limits with a focus on motorcycles.
- Increase the number of speed monitors and cameras on all roads in combination with increased fines for speeding vehicles.
- Place speed signs where the speed limit changes.

### Ho Chi Minh City Traffic Safety Committee (TSC), Ho Chi Minh City Department of Transportation and Public Works (DOT)

- Initiate mass-media campaigns to increase awareness of speed as a major risk factor for road traffic injuries, focusing on motorcycle drivers.
- Mandate motorcycle vendors to verify that motorcycle drivers possess valid licenses.
- Adjust speed limits to align with road design and global best practices (30 km/h on local roads, 50 km/h on arterial roads).
- Implement speed-calming measures particularly on roads and in areas where vulnerable road users interact with vehicles.

# Helmet Use\* in Ho Chi Minh City

Using a motorcycle helmet correctly can reduce the risk of fatality by 42% and the risk of serious head injury by 69% in the case of a crash.

\*Overall helmet use was defined as strapped or unstrapped use of a helmet of any type. Correct helmet use was defined as the use of a strapped helmet that was full-face or non-full face. Cap helmets were not considered to be correct helmet use. The stringent criteria used in defining correct helmet use in this study could potentially result in lower observed rate compared to other studies.



**Correct helmet use for both drivers and passengers was inconsistent;** it decreased from 81% in July 2015 to 53% in January 2018, and then increased to 69% in December 2020.



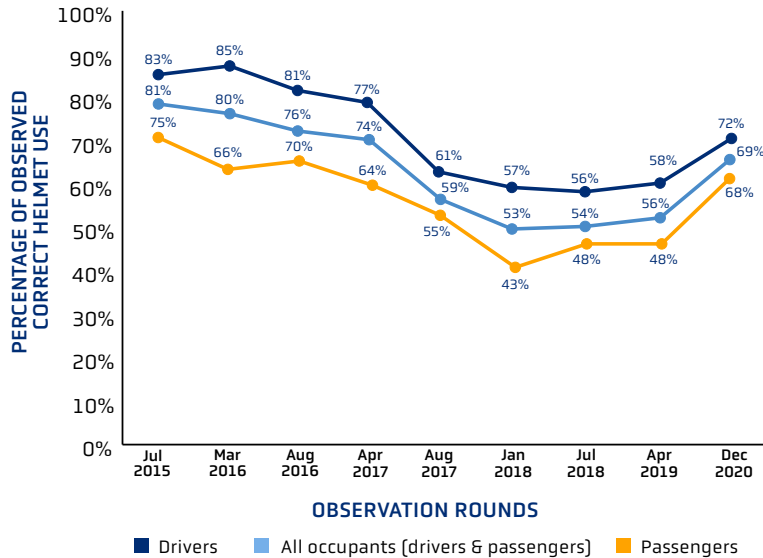
**Overall helmet use among motorcycle drivers in the evening was only 21%** compared with drivers wearing helmets in the afternoon (42%).



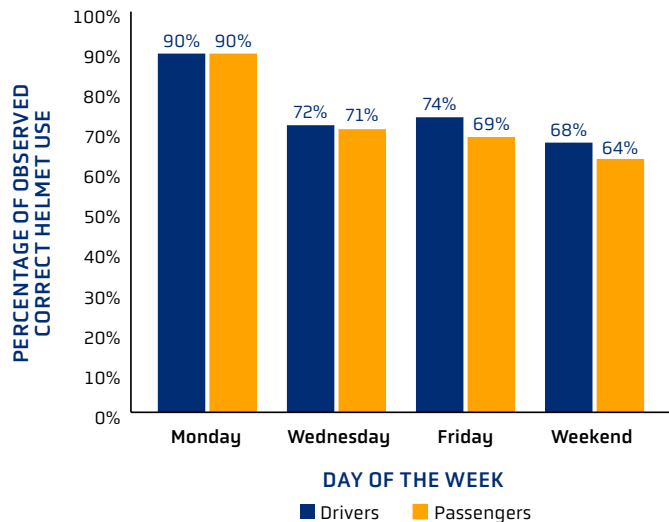
**Correct helmet use was the lowest on Sundays among both drivers (10%) and passengers (5%).**

# Key Findings on Helmet Use in Ho Chi Minh City

Correct helmet use increased from 2018 to 2020, showing the effectiveness of helmet enforcement



Efforts to enforce correct helmet use are needed during weekends, which had the lowest prevalence of correct helmet use



## Recommendations

### *Ho Chi Minh City Traffic Police and Other Law Enforcement Agencies*

- Enhance enforcement of correct helmet use for all riders, especially motorcycle passengers.
- Expand enforcement of helmet use to late hours of the day, weekends, and lower-capacity roads.

### *Ho Chi Minh City Traffic Safety Committee (TSC), Ho Chi Minh City Department of Transportation and Public Works (DOT)*

- Implement mass-media campaigns that are

1 Overall helmet use was defined as strapped or unstrapped use of a helmet of any type.  
 2 Correct helmet use was defined as the use of a strapped helmet that was full-face or non-full face (but not a cap helmet).

# Seat-Belt and Child Restraint Use in Ho Chi Minh City

Seat-belts and child restraints play a significant role in reducing the severity of injuries in the event of a crash; they reduce mortality by 50% in crashes in which motorists, passengers (including rear-seat passengers), and children would otherwise die. Children in front seats have a 40% higher road traffic injury risk than children in rear seats.

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**Seat-belt use among adult occupants increased** from 52% in January 2018 to 81% in December 2020.



**Seat-belt use was consistently lower among adult passengers** compared with adult drivers.

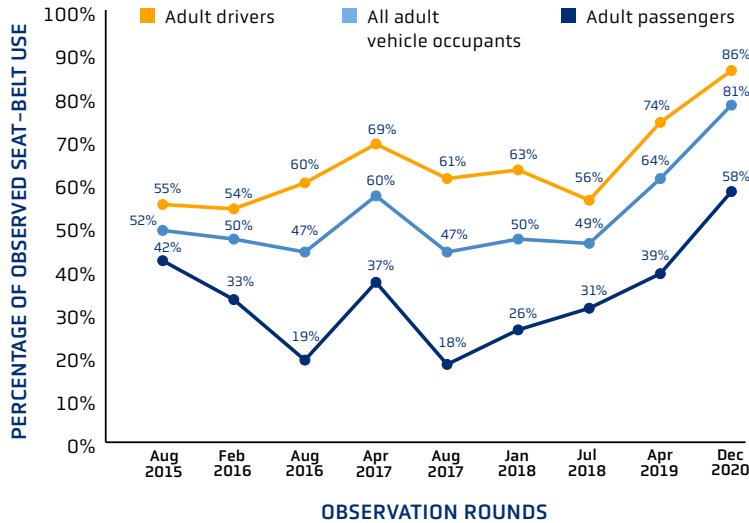


**Child restraint use was very low (4%) among children under 12 years old.**

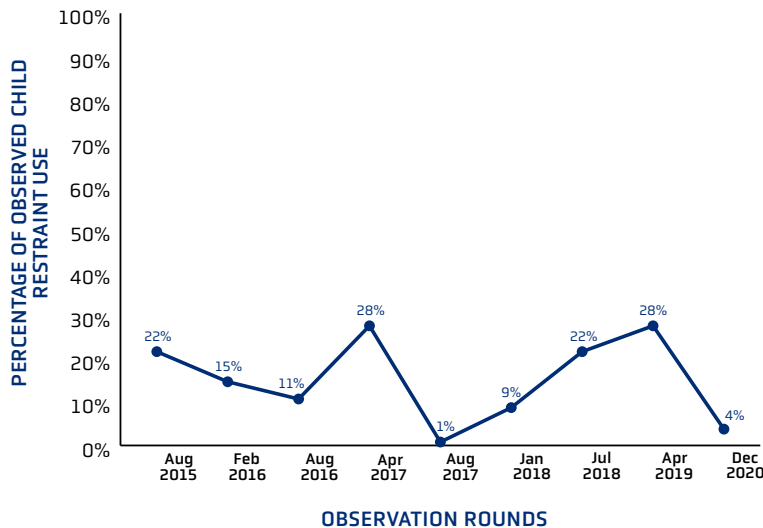


# Key Findings on Seat-Belts in Ho Chi Minh City

Seat-belt use among all adult vehicle occupants increased from 2015 to 2020, showing the effectiveness of self-belt enforcement



## Child restraint use remains low



## Recommendations

### *Ho Chi Minh City Traffic Police and Other Law Enforcement Agencies*

- Enhance enforcement efforts to promote seat-belt and child restraint use, focusing on adult rear-seat passengers and child passengers.

### *Ho Chi Minh City Traffic Safety Committee (TSC), Ho Chi Minh City Department of Transportation and Public Works (DOT)*

- Implement mass-media campaigns that promote seat-belt and child restraint use, focusing on high-risk groups including rear-seat passengers and children.
- Support efforts to pass a national child restraint law in line with global best practices.

Saving Lives Through Data, Geographic Information Systems (GIS) Technical Workshop, in Ho Chi Minh City, Vietnam.



## METHODS

Since 2015, the Johns Hopkins International Injury Research Unit has partnered with the Building and Road Research Institute to conduct roadside observations in Ho Chi Minh City. The methods for these findings were developed by the Johns Hopkins International Injury Research Unit and implemented in collaboration with Hanoi University of Public Health. This report provides results from observational surveys that represent population-level (citywide) prevalence of important road safety risk factors (speed, helmet use, and seat-belt and child restraint use). For speed, there were approximately 90,000 observations per round from 2020. In 2020, there were 45,523 observations for seat-belt and child restraint use, and 86,010 for helmet use.

Observation sites were randomly selected, conditional on the safety of observers. There were 12 observation sites used starting in 2020, and a standardized protocol was used with vehicles selected for observation in a systematic quasi-random fixed sequence. It is known that speeding is likely to be higher during the late night/early morning hours, but 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. Ho Chi Minh City is a large city area with diverse traffic characteristics and a wide range of road types. Consequently, observational results from the selected sites are subject to sampling errors that are difficult to precisely quantify. However, the methodology should have no inherent systematic biases. The data management team at the Johns Hopkins International Injury Research Unit reviewed and cleaned the data to produce the analyses available in this report.

## ACKNOWLEDGMENTS

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**CONTACT:** [jhsph.iiru@jhu.edu](mailto:jhsph.iiru@jhu.edu)

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REPORT  
PREPARED BY:

Bloomberg  
Philanthropies

Initiative for Global  
**Road Safety**

 **JOHNS HOPKINS**  
BLOOMBERG SCHOOL  
of PUBLIC HEALTH

International  
Injury Research Unit