KUMASI
ROAD SAFETY ANNUAL REPORT 2021

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International Injury
Research Unit

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HON. SAMUEL PYNE
Mayor of Kumasi

In 2020, Kumasi Metropolitan Assembly (KMA) partnered with Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) to reduce road crashes, injuries and fatalities in the city through the implementation of proven interventions.

This second Kumasi road safety report provides information that enables stakeholders to track trends and to assess the magnitude of road crashes, deaths and injuries. Findings on at-risk road user groups, risk periods and high-risk crash locations should guide the implementations of interventions for improved outcomes.

I hope this partnership between KMA and BIGRS will not only reduce deaths and injuries from road crashes but will also improve the well-being of both city residents and non-residents.

The efforts at the city level should also compliment national efforts. I encourage stakeholders at the local and national levels to use data to inform their actions to improve safety of road users.

I would like to thank Bloomberg Philanthropies for selecting Kumasi to participate in the Global Road Safety Initiative. As one of the BIGRS cities, Kumasi is committed to realizing the goals of this initiative. I also thank all local and external partners for their support in improving safety on our city's roads.

Chief Supt. Emmanuel Adu-Boahen

Regional Commander of MTTD, Ghana Police Service

The Motor Traffic and Transport department (MTTD) of the Ghana Police Service is charged with managing and controlling traffic and enforcing road traffic laws and regulations. The department investigates and records road crashes, educates road users on crash-free road practices, and manages traffic flow.

In addition, Police collaborate with other key stakeholders and ministries to promote road safety through enforcement activities. Congratulations to KMA-BIGRS for providing such a detailed report on the road crash situation in Kumasi.

The findings on risk periods and high-risk crash locations will inform police operational planning and staffing. The MTTD appreciates the support of the global road safety initiative in building the enforcement capacity of traffic officers to mitigate road crash risk factors in the city.

We look forward to your continued collaboration as we work towards reducing road traffic crashes and the associated deaths and injuries.

ACKNOWLEDGEMENT

This second road safety report for Kumasi was developed with support from the Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS). The goal of these reports is to provide ongoing reporting to monitor road crash outcomes in the city, with the aim of significantly reducing road traffic deaths and injuries by implementing evidence-based interventions.

Several local and external partners contributed to the content of the report. Crash data were obtained from the Motor Traffic and Transport Department (MTTD) of the Ghana Police Service. National Service and National Builders Corps (NABCO) fellows at KMA supported data collection at police stations. Vital Strategies provided technical support for the production of this report. Johns Hopkins International Injury Research Unit (JH-IIRU) provided data on the behavioural risk factors presented in the report.

Kingsley Wirekoh, the BIGRS Surveillance Coordinator in Kumasi, coordinated the collection of 2021 crash data directly from police stations in the city, performed data analysis, and drafted the report. Raphael Awuah, the Regional Technical Advisor for Africa on Road Injury Surveillance, and Sara Whitehead, the global lead for Road Injury Surveillance System Strengthening – both from Vital Strategies – supervised data collection and analysis, review, and publication of the report.

The BIGRS team – Akwasi Wireko Brobby (Initiative Coordinator), Obed Opoku-Afrane (Enforcement Coordinator) Mavis Obeng-Mensah (Communications Officer) and Samuel Boamah Danquah (Senior Manager and Road Design and Transportation Coordinator) and Mark Tonyemevor (Urban Mobility Analyst, WRI) – provided input to sections of the report.

Special thanks go to Bloomberg Philanthropies, Vital Strategies, KMA Transport Department, the Regional Commander and officers of the MTTD, Ghana Police Service and National Road Safety Authority (Ashanti region).

EXECUTIVE SUMMARY

Understanding the magnitude and risks of road traffic deaths and injuries expedites the implementation of timely interventions. This city-specific annual safety report presents information on deaths and injuries from road traffic crashes in the Kumasi metropolitan area using data from police records from 2017 to 2021. The recent round of the observational assessment of behavioural risk factors for road injuries in Kumasi is also presented in the report.

Findings show a consistent increase in the number of reported road traffic deaths in Kumasi from 2017 to 2021. The number of reported deaths rose from 155 in 2020 to 160 in 2021 — a 3% increase.

Vulnerable road users — pedestrians, motorcyclists, and cyclists — have accounted for more than two-thirds of fatalities from 2017 to 2021. In 2021, vulnerable road users made up 76% of the reported road traffic deaths. Males accounted for more than 70% of deaths and injuries from 2017 to 2021. The highest proportion of deaths in 2021 was recorded among people aged 30 to 39 years.

Locations such as the Anloga junction, Boadi junction, Amakom traffic intersection, Krofuom traffic intersection and Abrepo junction emerged as high-risk locations for fatal and serious-injury crashes.

Findings from the road injury risk factor observational studies on selected corridors showed a 33% prevalence of speeding in Kumasi in 2021. Helmet and seat belt use were not assessed in 2021. However, helmet use was very low when assessed in 2020, with just 44% of drivers and 6% of passengers correctly using helmets. One-quarter (25%) of drivers were observed using seat belts when assessed in 2020.

76%

76% of road traffic deaths were among vulnerable road users in 2021.

19%

19% of the reported deaths occurred due to crashes between 6 p.m. and 8 p.m. in 2021

60%

Pedestrians constituted 60% of the reported deaths in 2021.

46%

46% of deaths occurred due to crashes on weekends in 2021.

76%

76% of deaths were among males in 2021.

33%

33% of vehicles were observed speeding over the posted limit in 2021.

21%

21% of deaths occurred among those aged 30 to 39 years in 2021.

44%

44% of motorcycle drivers and 6% of passengers correctly wore helmets in 2020.

LIST OF ABBREVIATIONS

KMA	Kumasi Metropolitan Assembly
BIGRS	Bloomberg Initiative for Global Road Safety
BRRI	Building and Road Research Institute
JHU-IIRU	Johns Hopkins University International Injury Research Unit
MTTD	Motor Traffic and Transport Department
NABCO	National Builders Corps
GPS	Global Positioning System (GPS)
QGIS	Quantum Geographic Information System (QGIS)

INTRODUCTION

Road traffic injuries are a leading cause of mortality and morbidity, especially in low- and middle- income countries (LMICs), where more than 90% of all road traffic deaths occur [1,2] . It is estimated that LMICs will experience approximately $834 billion in economic losses between 2015 and 2030 due to fatal and nonfatal road crash injuries[3] . Without appropriate interventions, road traffic deaths and injuries are projected to increase in LMICs given the sharp increase in motorization[3] .

Countries in Africa have higher rates of road traffic deaths compared to rates worldwide and in other global regions, with 27 deaths per 100,000 population in 2019 compared to 17 deaths per 100,000 population globally and 16 deaths per 100,000 for countries in Southeast Asia[4] . In Ghana, road injury ranks eighth in the top ten causes of death[5] with vulnerable road users having the highest risk.

Context-specific interventions are needed to prevent road traffic deaths and injuries, particularly in urban areas [5,6].

Kumasi at a Glance

Kumasi, also known as the "Garden City," is the second largest metropolitan area in Ghana and the capital of the Ashanti Region. The strategic location of Kumasi as well as its rich forest and other natural resources has strengthened and shaped the city's role as a transit point and commercial hub for people in northern Ghana.

The city is zoned into commercial, industrial, and residential areas. The main modes of transportation include private vehicles, taxis, commercial minibuses (popularly referred to as trotro), and tricycles (popularly referred to as pragia, an increasingly common mode of transportation).

PURPOSE OF REPORT

This report presents information on deaths and injuries from road traffic crashe in the Kumasi metropolitan area from 2017 to 2021, using data from police reports. The report includes results from spatial analysis which show the distribution of fatal and serious injury crashes within the city. In addition, the report provides information on road-user risk behaviours and implemented actions to improve road safety in Kumasi.

DATA SOURCES

Police crash records are the source of official road traffic crash data in Ghana. An adapted version of the Building and Road Research Institute (BRRI)/Ghana Police Service data form was used to extract data from narrative police crash reports for 2021.

Global Positioning System (GPS) coordinates analyzed for this report were derived with the use of Quantum Geographic Information System (QGIS) software and were generated based on the textual description of the crash location in police records. Base map layer of the city was sourced from Open Streets Maps (OSM).

Data on risk factors for road injuries – helmet use, speeding and seatbelt/ child-restraint use – were assessed through observation by Johns Hopkins University International Injury Research Unit (JH-IIRU) and BRRI.

DEFINITIONS

The definitions used in this report align with those used by the National Road Safety Authority (NRSA), the lead agency for road safety in Ghana.

Road Traffic Crash
A crash resulting in injury, death or property damage that involves at least on vehicle on a public road.

Crash severity: fatal
A crash in which at least one person dies immediately or within 30 days of the incident.

Crash severity: serious injury
A crash resulting in at least one person being detained in a hospital as an inpatient for more than 24 hours.

SECTION 1

Road Traffic Deaths and Injuries in Kumasi

ROAD CRASHES, DEATHS AND SERIOUS INJURIES

The number of reported road traffic crashes in Kumasi fell from 1371 in 2020 to 1255 in 2021 – an 8% decrease (Figure 1). However, there was a 3% increase in fatalities in 2021 over the previous year (Figure 2).

Figure 1: Road traffic crashes in Kumasi, 2017–2021

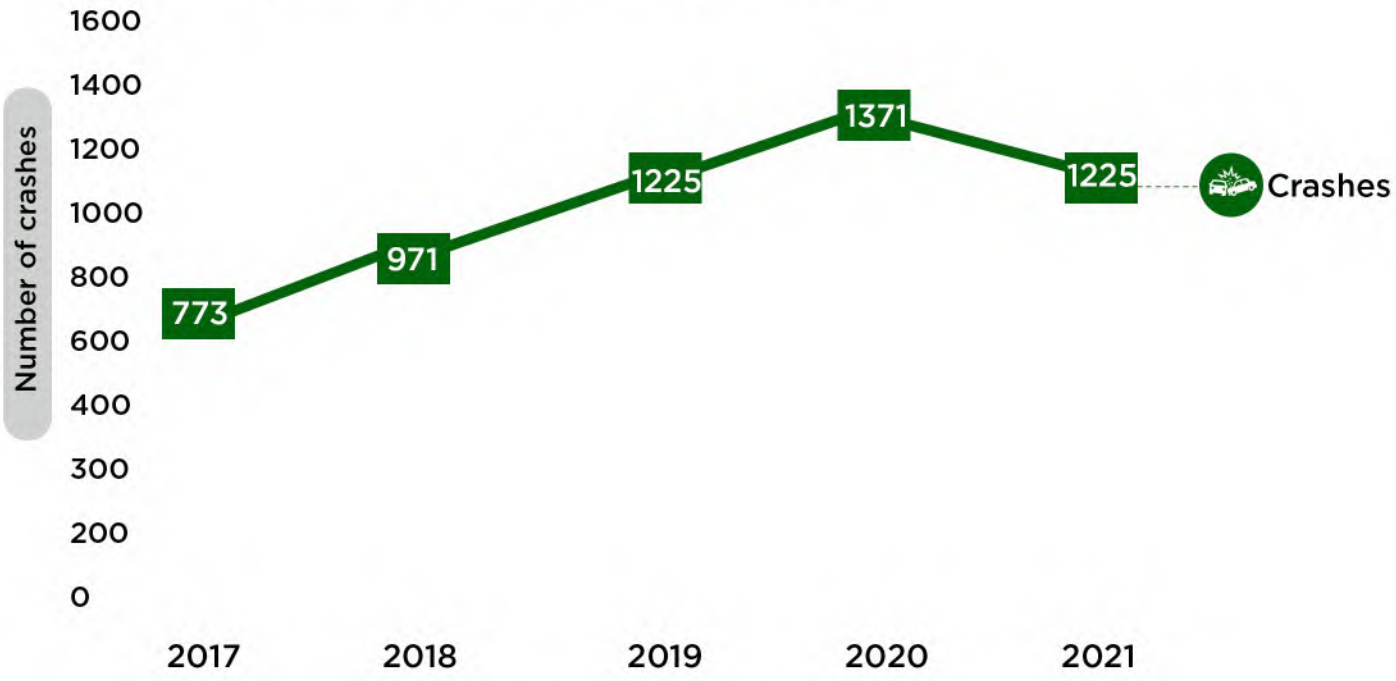
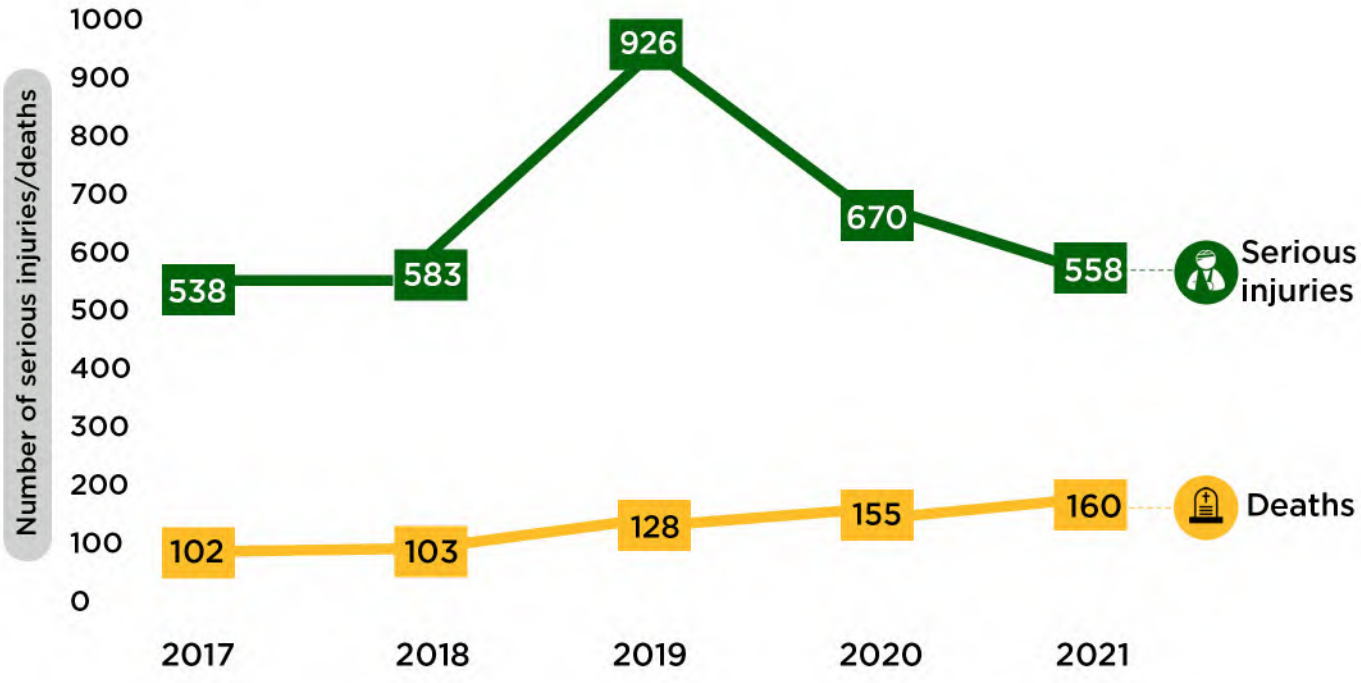


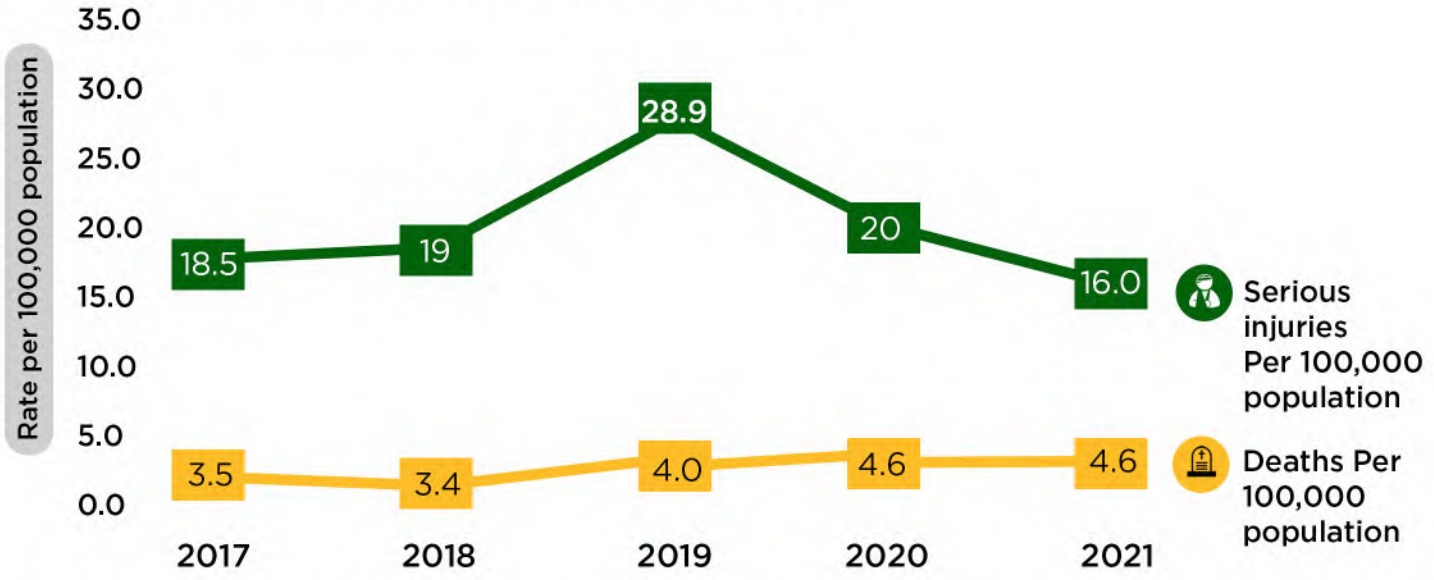
Figure 2: Road traffic trends in Kumasi, 2017–2021



DEATHS AND SERIOUS INJURIES RATE

The death rate per 100,000 population in 2021 remained at 4.6, unchanged from 2020. The serious injuries rate per 100,000 population has steadily decreased since 2019 (Figure 3).

Figure 3 : Deaths and serious injury rates, 2017– 2021



DEATHS AND SERIOUS INJURIES BY ROAD USER TYPE

Pedestrians made up the largest proportion of fatal victims from 2017 to 2021 (Figure 4), and that proportion has continued to increase. Vulnerable road users pedestrians, bicyclists, and motorcyclists – accounted for 76% of deaths in 2021 (Figure 5). This is a typical urban pattern and quite distinct from non-urban areas, where higher-speed roads put vehicle occupants at a higher risk of death. It is important that interventions to improve road crash outcomes are oriented to protecting pedestrians and other vulnerable road users. It is deeply concerning that pedestrian deaths in particular have increased sharply over the past four years.

Figure 4 : Deaths by road user type, 2017–2021

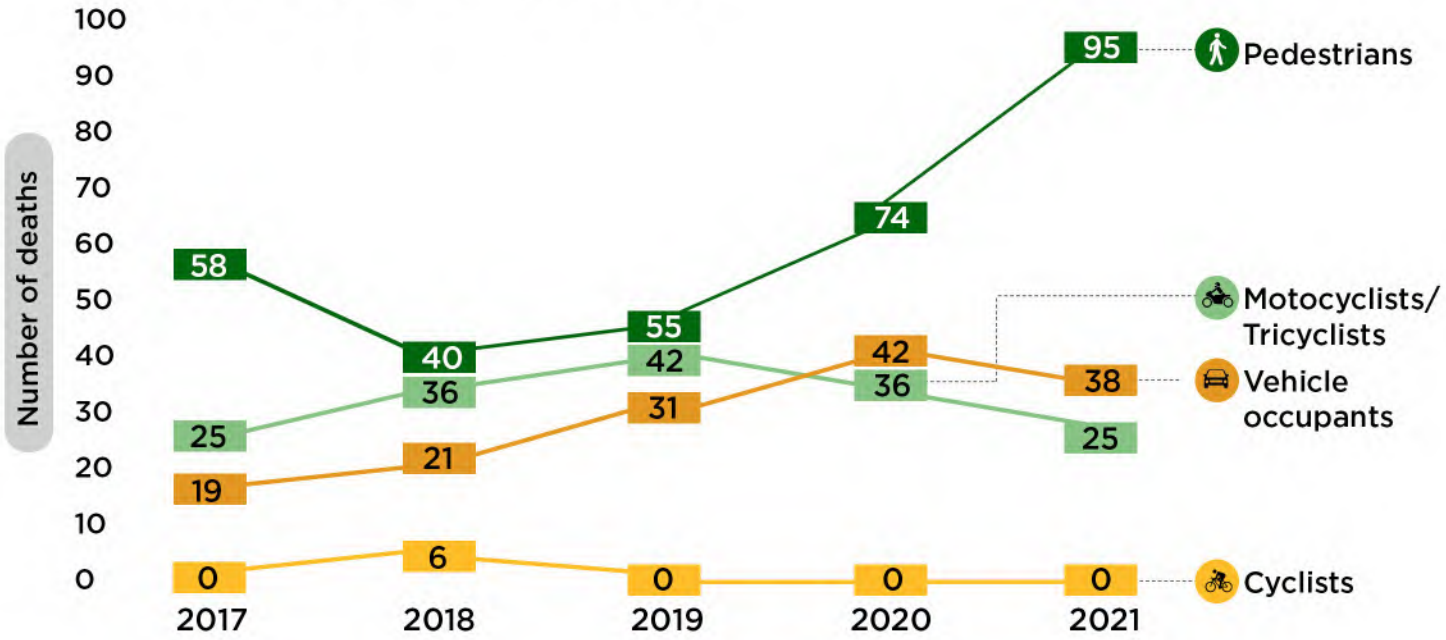


Figure 5 : Percentage distribution of deaths by road user type, 2021

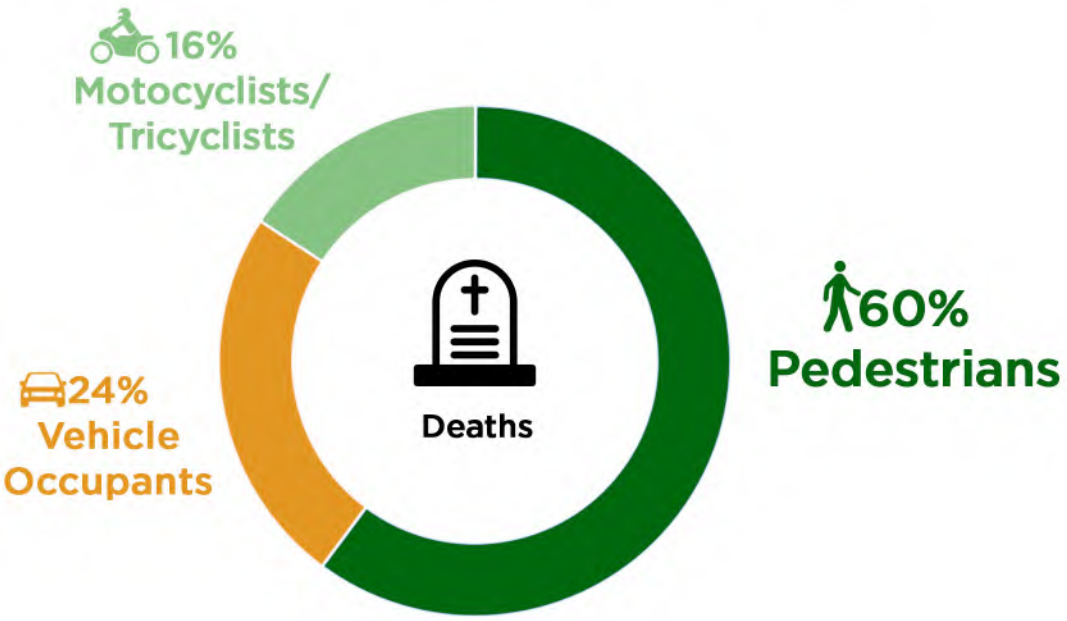


Figure 6 : Serious injuries by road user type, 2017–2021

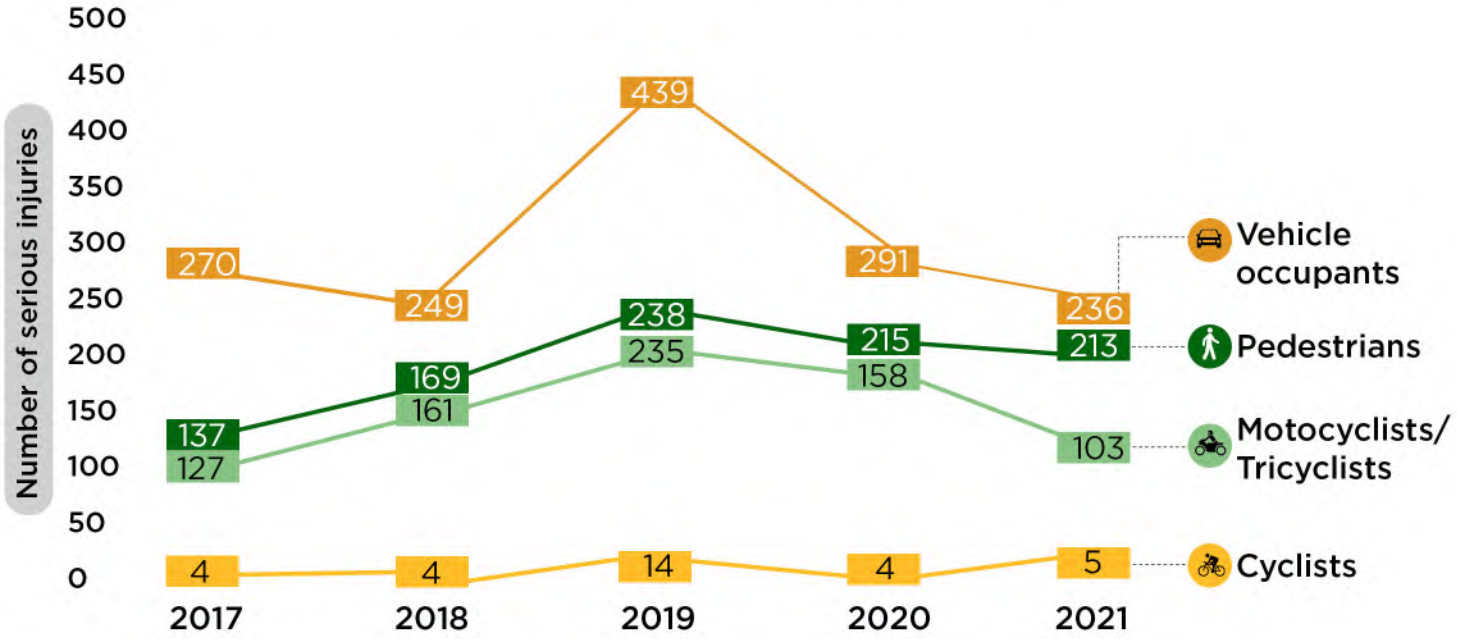
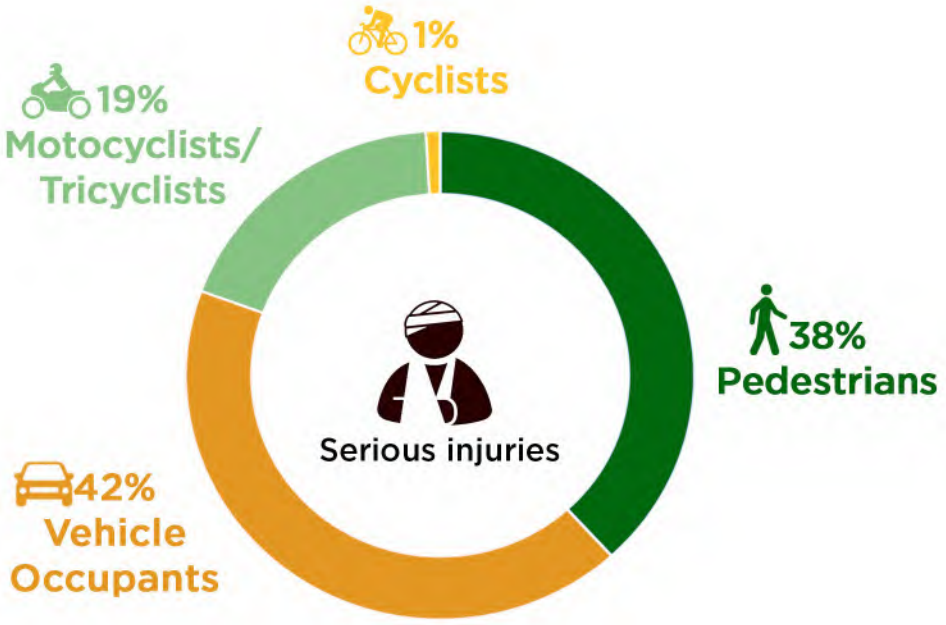


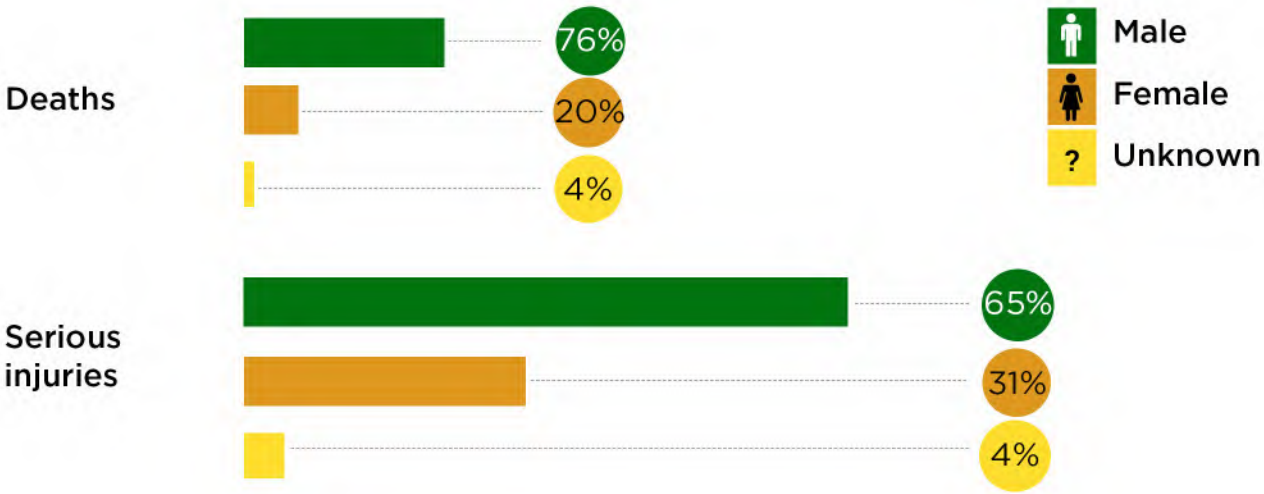
Figure 7 : Percentage distribution of serious injuries by road user type, 2021



DEATHS AND SERIOUS INJURIES BY SEX

Figure 8 shows deaths and serious injuries by sex. From 2017 to 2021, there were more male deaths and serious injuries than females – consistent with the global pattern[7].

Figure 8 : Serious injuries and deaths by sex, 2021



DEATHS AND SERIOUS INJURIES BY AGE

The highest number of deaths in 2021 occurred among those aged 30 to 39 year – 23 reported deaths among males and 7 among females (Figure 9). The highest proportion of seriously injured victims were those aged 20 to 29 years – 103 reported serious injuries among males and 28 among females (Figure 10). A similar age distribution has been observed in traffic injury deaths and related hospitalizations in many countries in Asia and Africa[8] . Many of these victims are economically active, resulting in loss of income for households who lose breadwinners and suffer increased expenditures from the direct costs of injury treatment.

Figure 9 : Deaths by age group, 2021

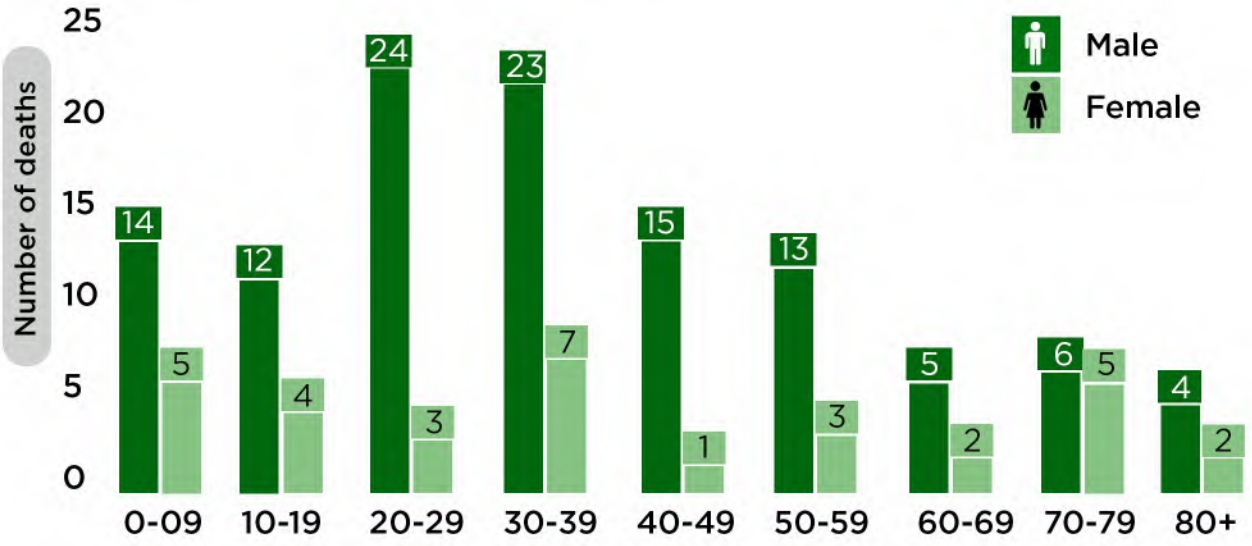
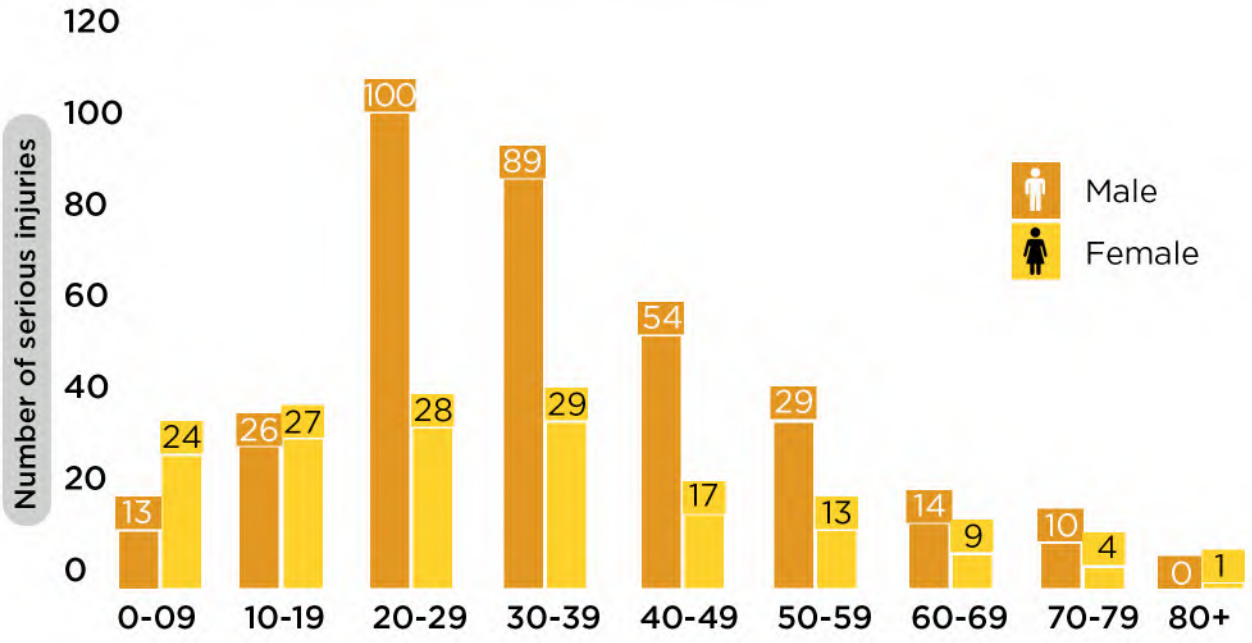


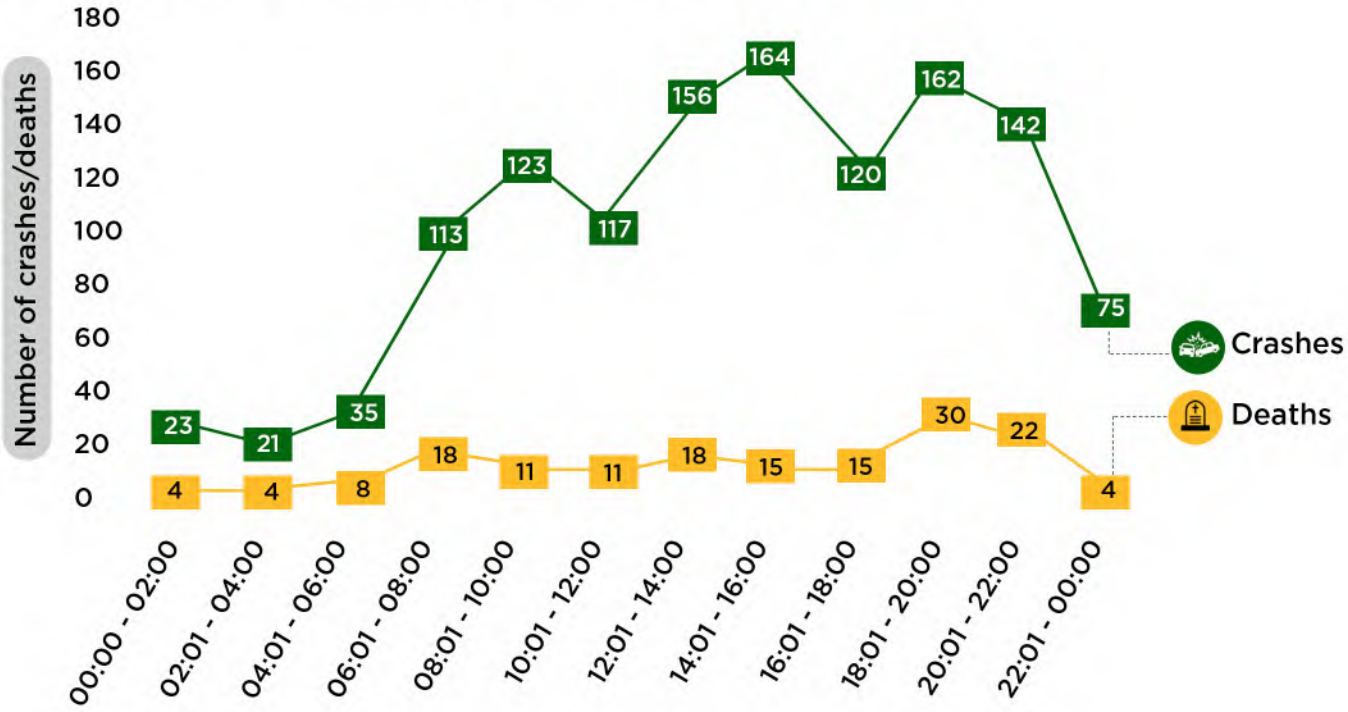
Figure 10 : Serious injuries by age group, 2021



CRASHES AND DEATHS BY TIME OF THE DAY

In 2021, the greatest number of crashes occurred between 2 p.m. and 4 p.m. However, road deaths were most frequent following crashes between 6 p.m. and 8 p.m. (Figure 11). This pattern of road deaths remained unchanged from the previous year. These findings can be used by the police in deploying officers for enforcement and traffic control in the city.

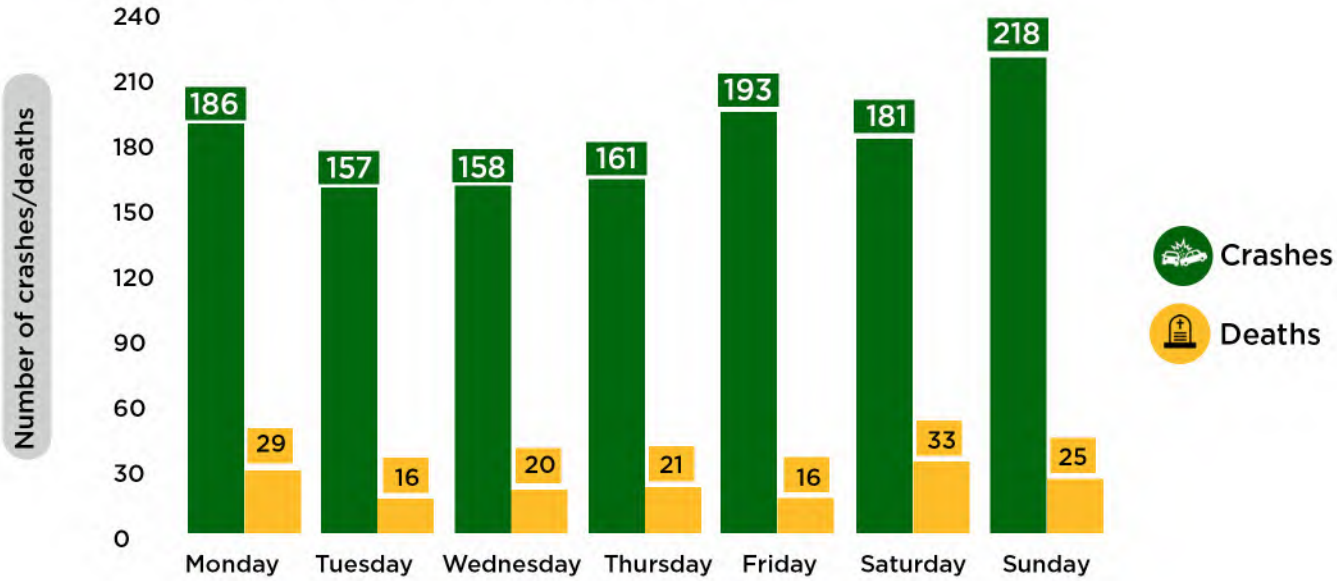
Figure 11 : Crashes and deaths by time of day, 2021



CRASHES AND DEATHS BY DAY OF THE WEEK

There was no observed pattern for crashes during weekdays. However, weekends (Friday to Sunday) accounted for 46% of the reported road deaths (Figure 12). This pattern is similar to that observed the previous year and may be due to speeding, alcohol use, and decreased police enforcement on weekends. These findings can inform police operational staffing and planning for risk-factor enforcement.

Figure 12 : Crashes and deaths by day of week, 2021



DEATHS BY TIME AND DAY OF THE WEEK

Deaths by day and time of week for 2021 are presented in Table 1. The findings highlight the need for enforcement at targeted days and times.

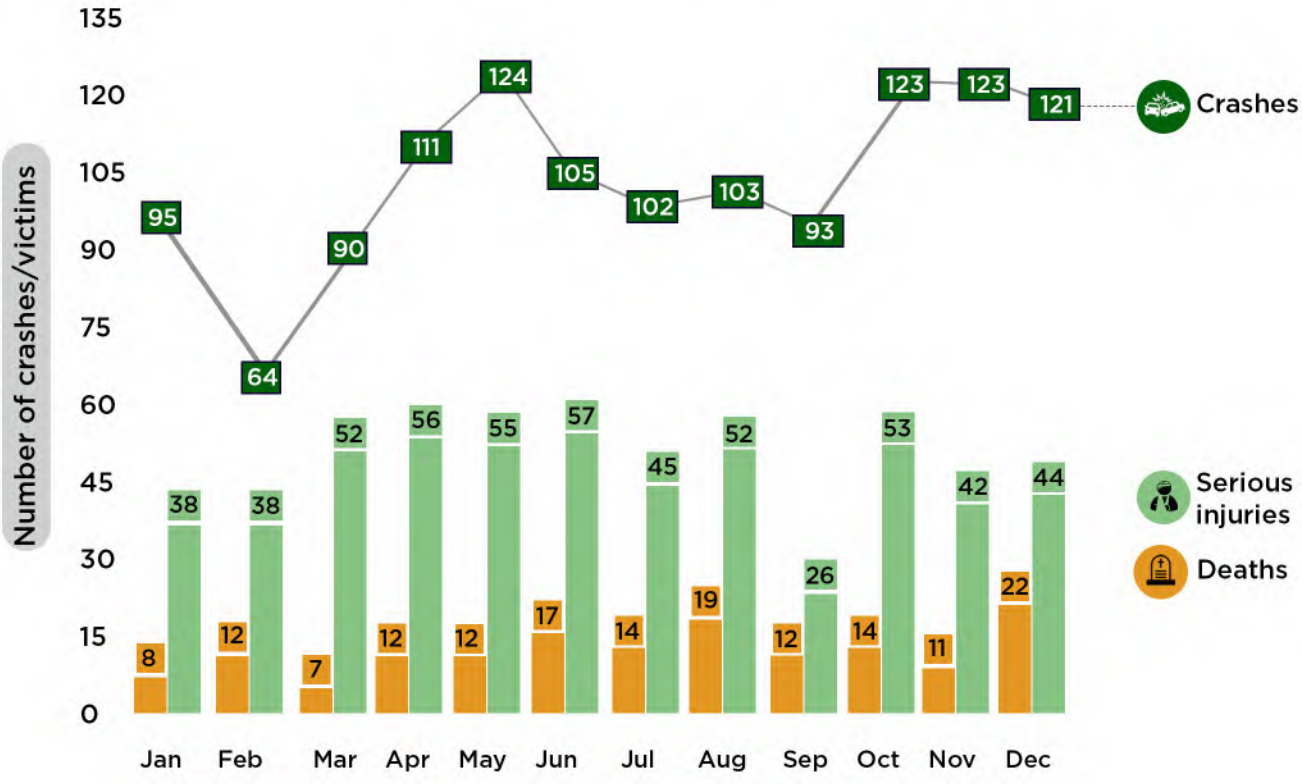
Table 1 : Deaths by time and day of the week, 2020–2021

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
00:01-04:00	1	0	2	0	0	8	1
04:01-08:00	9	6	4	8	6	6	7
08:01-12:00	8	6	2	7	6	6	8
12:01-16:00	15	3	5	6	9	16	9
16:01-20:00	12	12	16	15	7	14	15
20:01-00:00	11	6	5	4	12	12	14
Total	46	33	34	40	40	62	54

CRASHES, DEATHS AND SERIOUS INJURIES BY MONTH

The distribution of crashes, deaths and serious injuries by month showed no seasonal pattern for 2021 (Figures 13). The highest number of reported deaths in 2021 occurred following crashes in December.

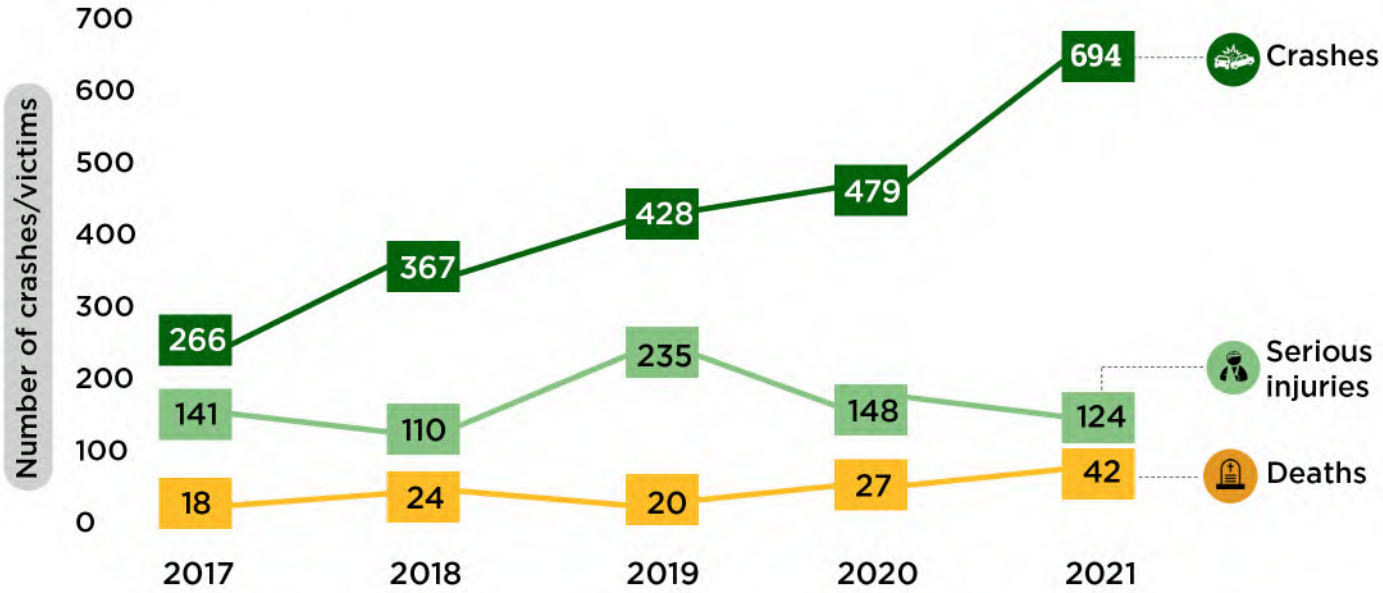
Figure 13 : Crashes, serious injuries and deaths by month, 2021



CRASHES, DEATHS AND SERIOUS INJURIES INVOLVING COMMERCIAL BUSES AND MINIBUSES

The number of reported road traffic crashes in Kumasi involving commercial buses and minibuses (popularly referred to as trotro) increased from 479 in 2020 to 694 in 2021 – a 44% increase. Deaths increased attributed to trotro increased by 55% (Figure 14). Half of the deaths involving trotro were pedestrians (53%).

Figure 14 : Crashes, deaths, and serious injuries involving commercial minibuses and buses, 2017–2021



DEATHS BY ROAD USER AND CASUAL VEHICLE TYPE

Table 2 below shows the correlation between deaths by road user type and vehicles found "at fault". Deaths among pedestrians were most frequently caused by cars or pickups (40%). Buses, minibuses and heavy goods vehicles were the causal vehicles in 27% and 17% of pedestrian deaths respectively in 2021.

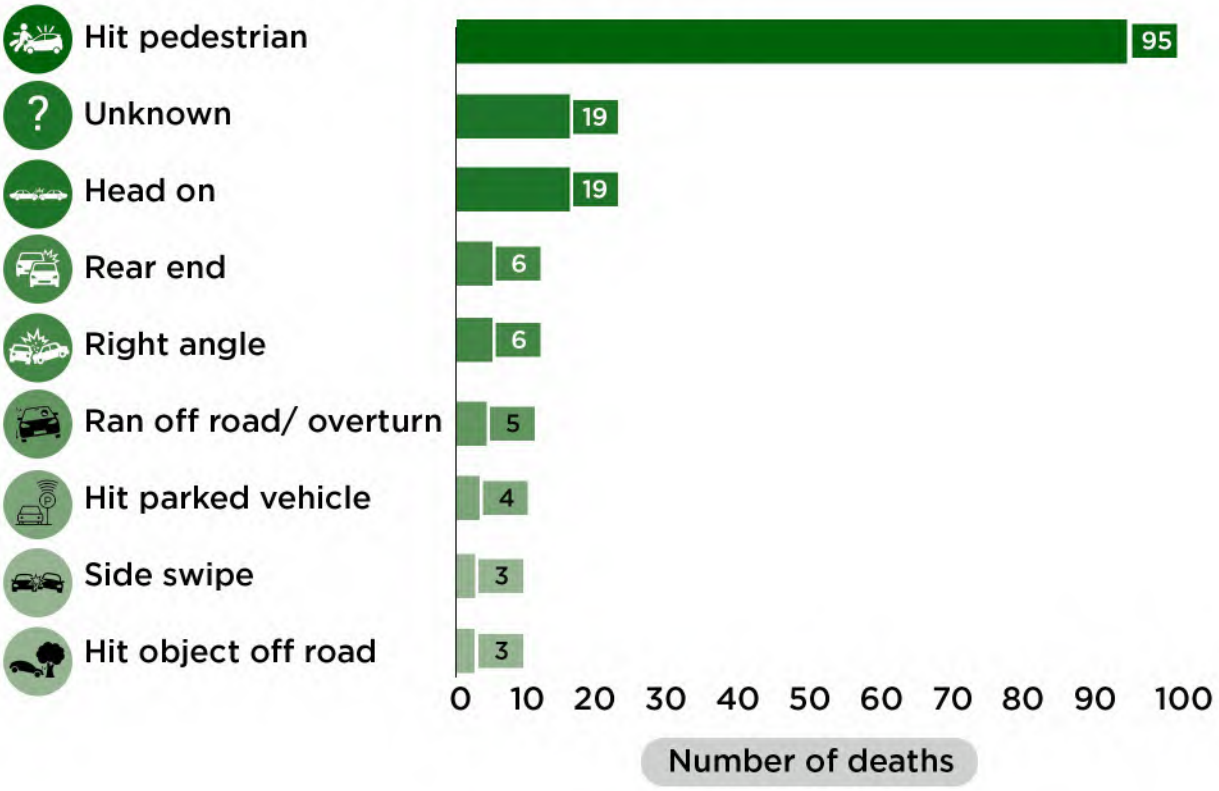
Table 2 : Deaths by road user and causal vehicle type, 2020–2021

	Causal Vehicle						
Victim/Road user type	Car/SUV/ Pickup	Bus/ Minibus	Heavy Goods Vehicle	2 and 3 Wheelers	Single Vehicle Crash	Others/ Unknown	Total
Car/SUV/Pickup occupants	13	2	1	0	8	3	**27**
Bus and minibus occupants	3	18	9	0	9	0	**39**
Heavy Goods Vehicle	3	3	5	0	2	0	**13**
Motorcyclists	11	6	8	6	3	2	**36**
Tricyclists	5	6	3	7	4	1	**26**
Cyclists	0	0	0	0	0	0	**0**
Pedestrians	68	46	28	12	0	15	**169**
Others/Unknown	1	0	0	0	0	3	**4**
Total	**104**	**81**	**54**	**26**	**26**	**24**	**315**

DEATHS BY COLLISION TYPE

Vehicle – pedestrian and head-on collisions constituted 59% and 12% of the reported deaths, respectively, in 2021 (Figure 15).

Figure 15 : Deaths by Collision Type, 2021



SPATIAL ANALYSIS OF CRASHES, DEATHS AND SERIOUS INJURIES

Maps showing high-risk locations for fatal and serious injury crashes are presented below. Using crash coordinates from 2020 and 2021, heat maps below show the location of all crashes (Figure 16), fatal crashes (Figure 17), serious injury crashes (Figure 18), pedestrian fatal crashes (Figure 19), pedestrian serious injury crashes (Figure 20), motorcyclist death and serious injury crash locations (Figure 21). Heat maps are visualisation tools for showing the intensity and pattern of road crash events [9, 10]

High-risk crash locations are presented in tables 3 to 7. These locations should inform priorities for road and intersection design interventions, as well as enforcement operational planing.

Table 3 : Top ten high-risk all crash points, 2020–2021

No.	Name of intersection/ junction/ roundabout	Number of crashes
1	Boadi junction (N6)	40
2	Anloga junction (intersection) (N6)	27
3	KNUST Police Station roundabout (N6)	27
4	Abrepo junction (intersection)	26
5	Suame roundabout	26
6	Siloam junction	23
7	Krofuom traffic intersection	18
8	Santasi roundabout	17
9	Sofoline interchange	13
10	Bekwai roundabout	12

Table 4 : Top ten high-risk fatal crash points, 2020–2021

No.	Name of intersection/ junction/ roundabout	Number of deaths
1	Anloga junction (intersection) (N6)	7
2	Boadi junction (N6)	5
3	Amakom traffic intersection	3
4	Krofuom traffic intersection	3
5	Abrepo junction (intersection)	2
6	Bekwai roundabout	1
7	Labour roundabout	1
8	Santasi roundabout	1
9	Siloam junction	1
10	Sofoline interchange	1

Table 5 : Top ten high-risk fatal crash corridors, 2020–2021

No.	Name of corridor	Number of deaths	Length of corridor (km)	Deaths per km
1	Accra – Kumasi road (N6)	6	1.7	3.5
2	PV Obeng bypass	6	2.0	3.0
3	Sunyani road	9	4.7	1.9
4	Osei Tutu boulevard	6	3.3	1.8
5	West End Hospital bypass	5	3.0	1.7
6	Eastern bypass	4	2.5	1.6
7	Bekwai road (N8)	6	4.3	1.4
8	Buokrom – Kenyasi road	7	5.6	1.3
9	Kumasi – Techiman road (N10)	6	5.6	1.1
10	Ejura – Kumasi road	5	5.8	0.9

Table 6 : Top five high-risk pedestrian fatal crash corridors, 2020–2021

No.	Name of corridor	Number of deaths	Length of corridor (km)	Deaths per km
1	Sunyani road	8	4.7	1.7
2	Accra – Kumasi Road (N6)	6	1.7	3.5
3	Bekwai road (N8)	5	4.3	1.2
4	Osei Tutu boulevard	5	3.3	1.5
5	PV Obeng bypass	5	2.0	2.5

Table 7 : Top five high-risk pedestrian fatal crash points, 2020–2021

No.	Name of intersection/ junction/ roundabout	Number of deaths
1	Amakom traffic intersection	3
2	Krofuom traffic intersection	3
3	Boadi junction (N6)	2
4	Shell Fuel Service Station junction (towards Asokwa)	2
5	Abrepo junction (intersection)	1

Figure 16: Heat map of all crashes, 2020–2021

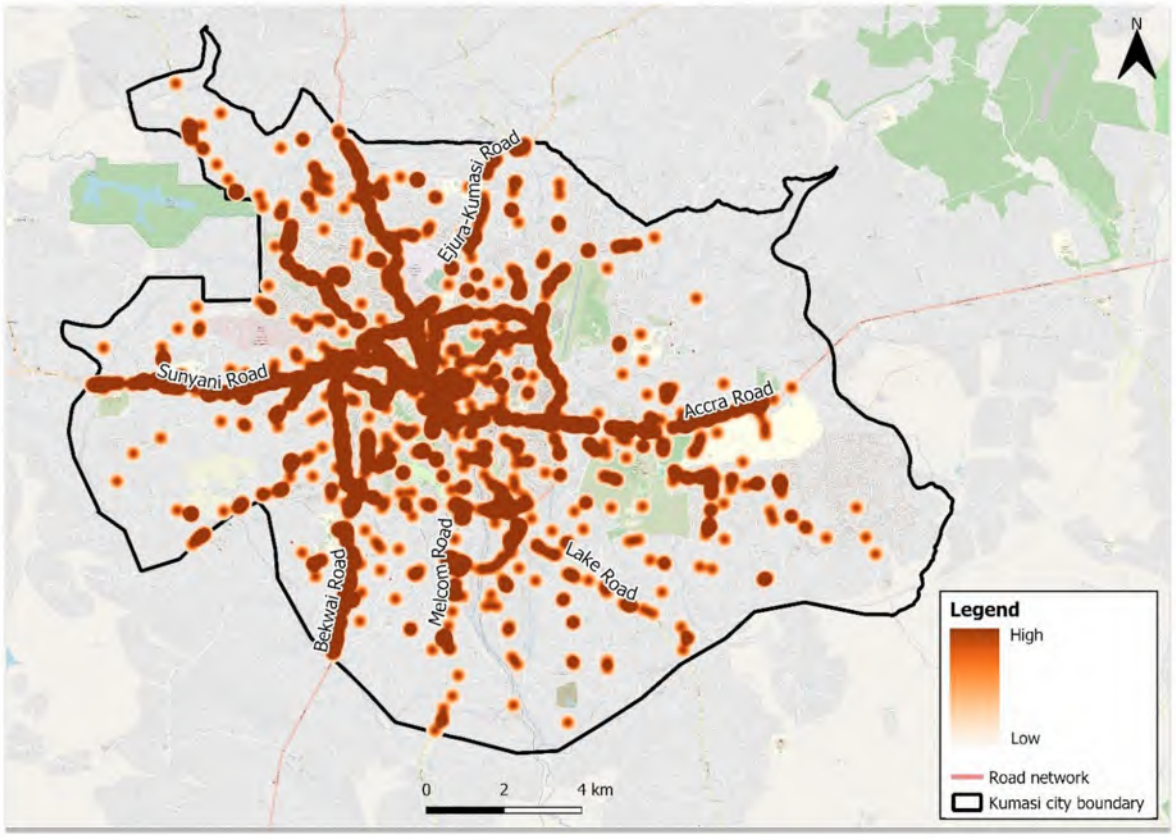


Figure 17: Heat map of deaths, 2020–2021

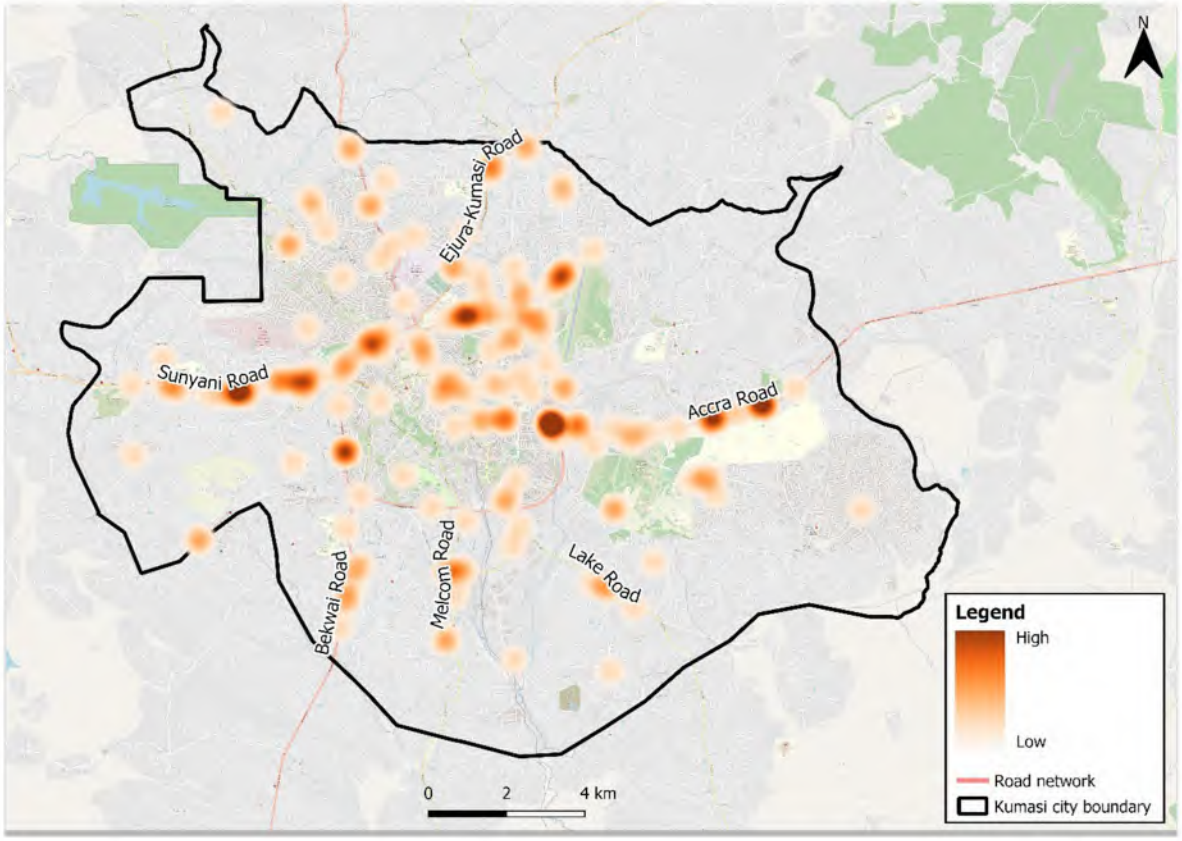


Figure 18: Heat map of serious injuries, 2020–2021

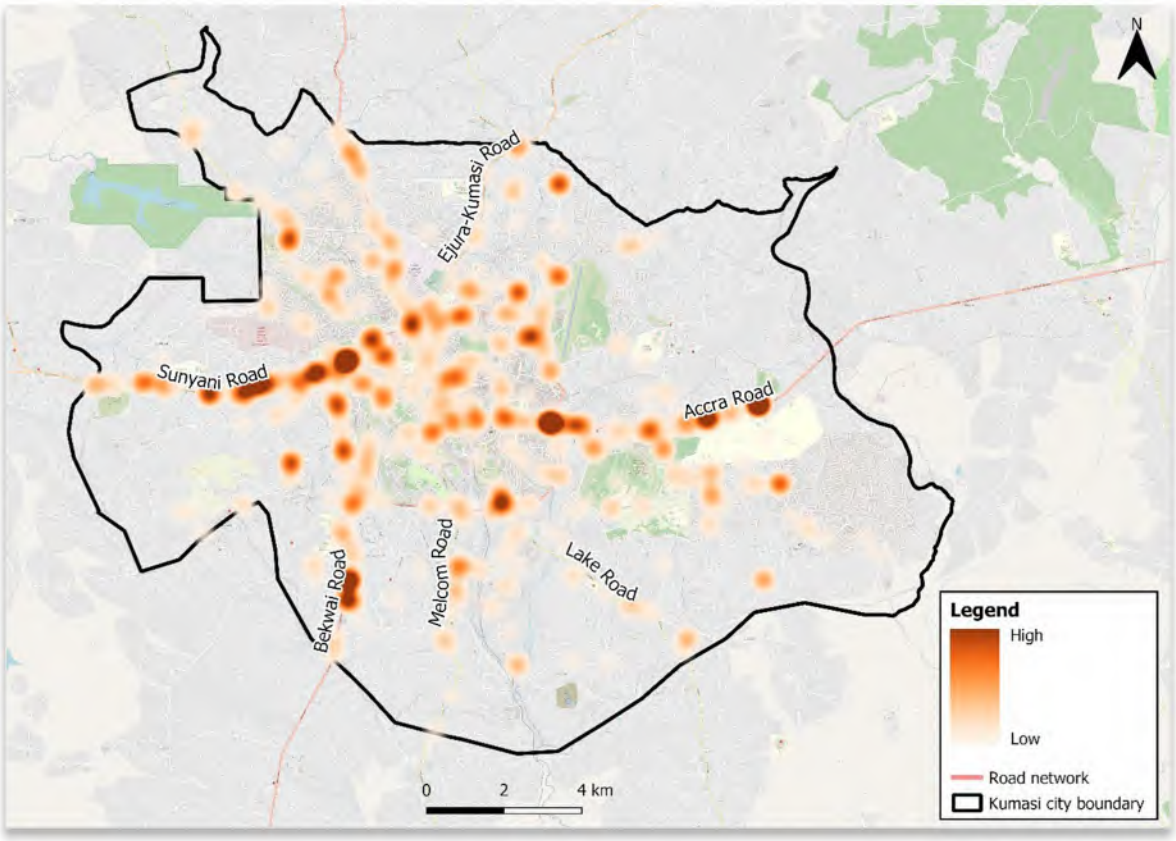


Figure 19: Heat map of pedestrian deaths, 2020–2021

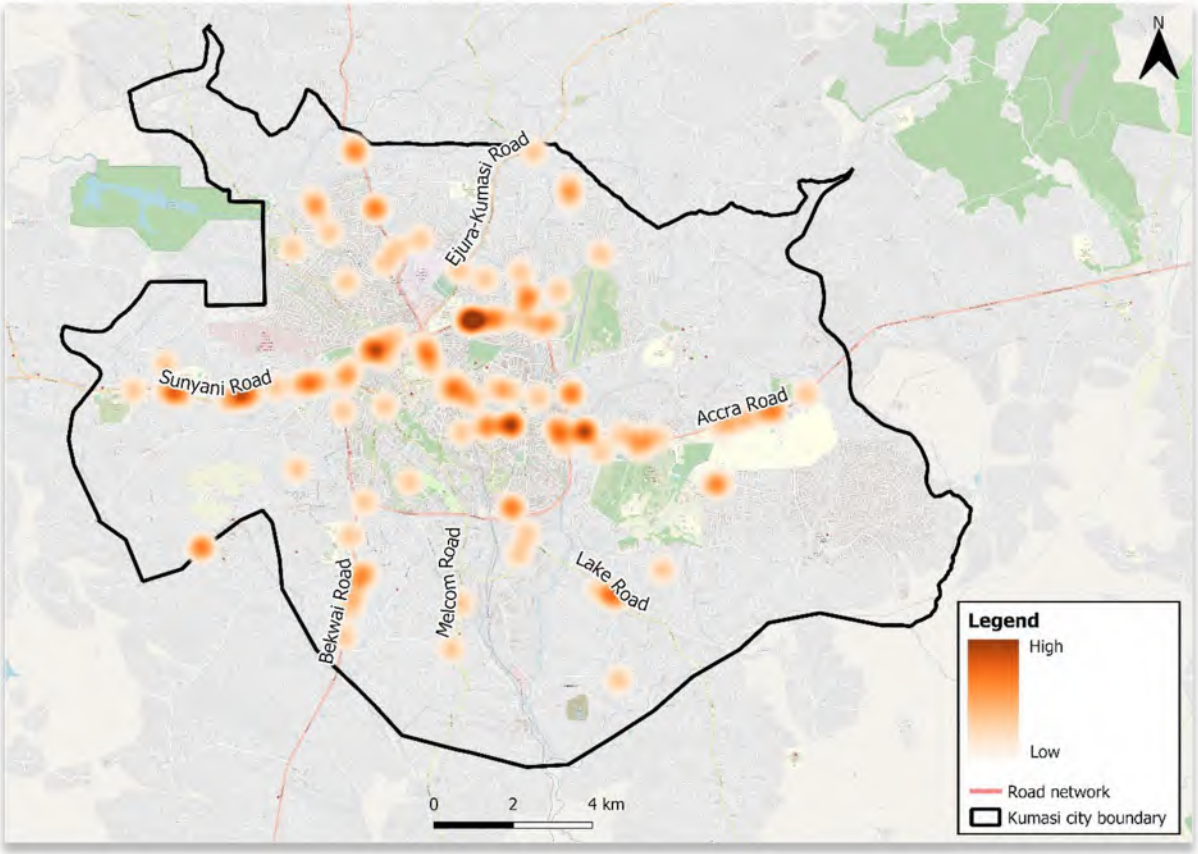


Figure 20: Heat map of pedestrian serious injuries, 2020–2021

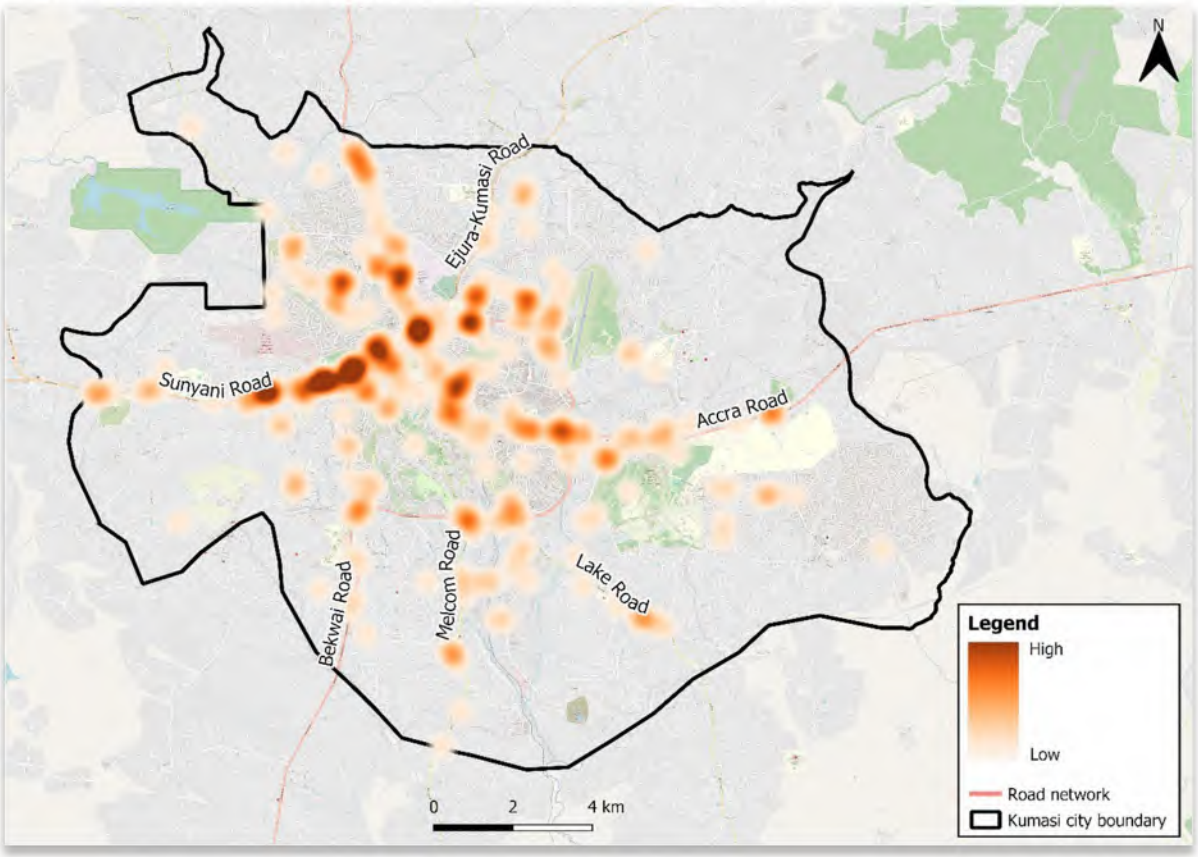
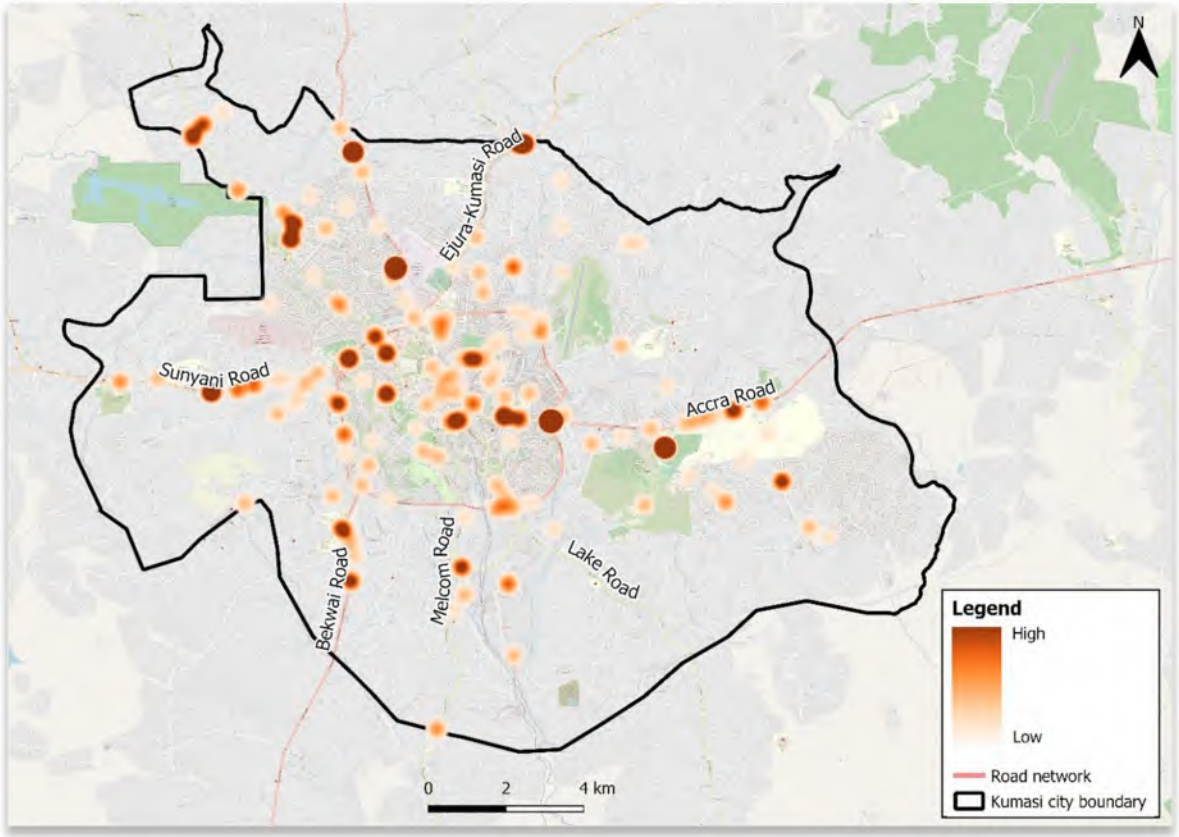


Figure 21: Heat map of motorcyclist deaths and serious injuries, 2020-2021



SECTION 2

Behavioural Risk Factors for Road Crashes in Kumasi

As part of BIGRS, Johns Hopkins University International Injury Research Unit (JHU-IIRU) conducts observational studies on selected road corridors in the city. The primary goal of these studies is to assess the prevalence and trends of key road injury behaviours – speeding, helmet use, seatbelt use and drink driving. Due to COVID-19, drink driving was not assessed. Speeding was the only risk factor assessed in the most recent round in May 2022.

SPEEDING

The prevalence of speeding in Kumasi increased to 33% in 2021, up from 29% in 2020 (Figure 21). A higher proportion of pickups/light trucks were observed speeding above the posted limit (42%) relative to other vehicle types (Figure 22). According to the WHO, increase in average speed is directly related both to the likelihood of a crash occurring and the severity of the crash. It is estimated that every 1% increase in average speed produces a 4% increase in the risk of fatal crashes and a 3% increase in the risk of serious injury crashes[7].

Figure 22 : Percent Distribution of Vehicles Speeding Over the Posted Limit, 2020 and 2021

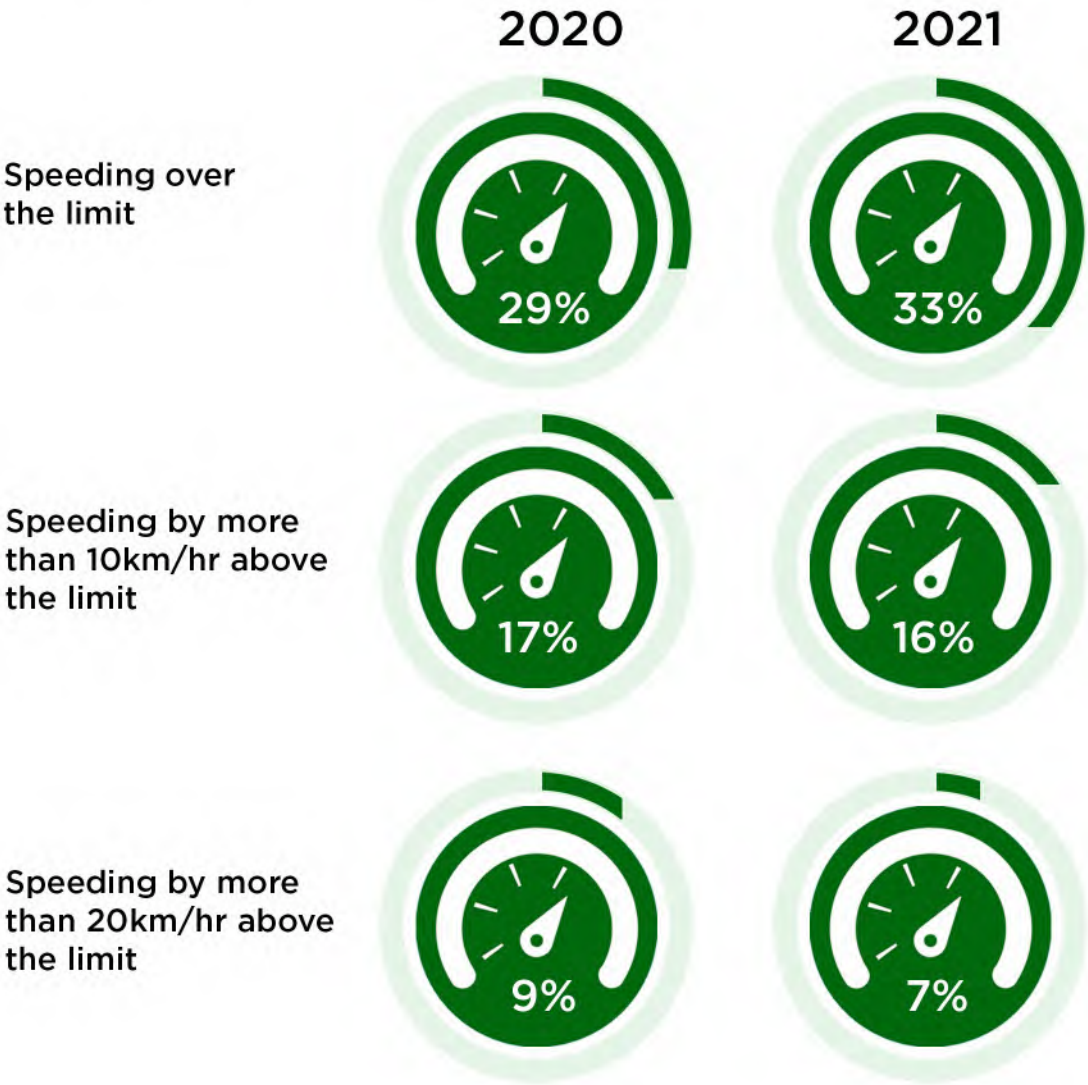
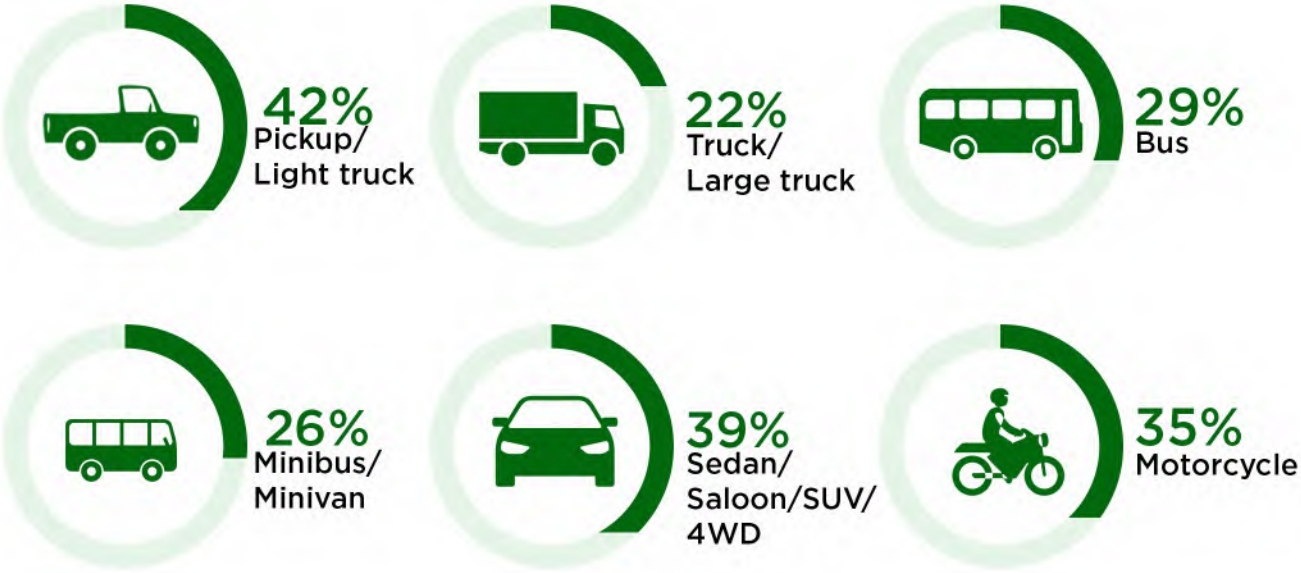


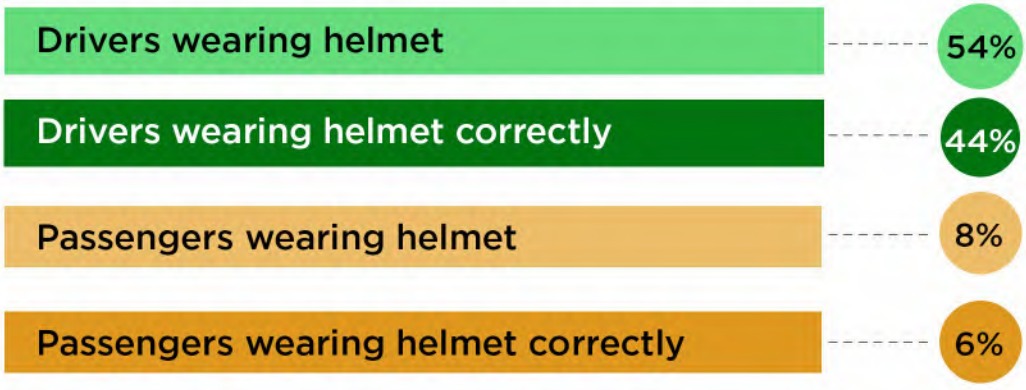
Figure 23 : Observed Speeding Over Speed Limit by Vehicle Type, 2021



HELMET USE

Correct helmet use among motorcycle drivers was significantly higher than among passengers – 44% compared to 6% (Figure 23). Correct helmet use can lead to a reduction in the risk of fatal head injuries [7].

Figure 25 : Observed Seat belt Use Among Drivers and Passengers



SEAT BELT AND CHILD RESTRAINT USE

The rates of seat-belt use were generally low among both drivers (25%) and passengers (5%). In addition, one out of five passengers estimated to be younger than 5 years old were observed using a child restraint. There is evidence to show that wearing a seat belt significantly reduces the risk of death among drivers and passengers[7].

Figure 25 : Observed Seat belt Use Among Drivers and Passengers

17%
Passengers less than 5 years using child restraints

SECTION 3

Selected Implemented Actions to Improve Road Safety in Kumasi

ENFORCEMENT ACTIVITIES

The enforcement technical area of BIGRS is coordinated by Global Road Safety Partnership (GRSP). This area seeks to improve the enforcement capacity of road traffic police officers in partner cities. Over 160 personnel of police MTTD and Kumasi Metro Guards have been trained in road safety and enforcement strategies to reduce crashes within the city.

GRSP courtesy call on the mayor of Kumasi

COMMUNICATION

MASS MEDIA CAMPAIGN

BIGRS in collaboration with the National Road Safety Authority embarked on a national mass media campaign focused on speeding. This national campaign was also specific to the cities of Kumasi and Accra. The campaign which was christened 'The Surgeon' targeted male drivers between the ages of 18 and 29 years.

ROAD CRASH VICTIMS REMEMBRANCE DAY

The World Day of Remembrance for Road Traffic Victims was commemorated in Kumasi with a visit to the Komfo Anokye Teaching Hospital (KATH). Led by the Coordinating Director of the Kumasi Metropolitan Assembly (KMA), the team visited road crash victims on admission at the hospital and donated groceries and hospital supplies to the victims.

STRATEGIC PLANNING MEETING

A strategic planning meeting was held to offer road safety stakeholders a platform to discuss road safety communication. The meeting supported the strategic planning and implementation of an upcoming mass media campaign.

JOURNALIST TRAINING

As part of the launch of the mass media campaign, a workshop was held to train journalists and enhance their knowledge and skills in road safety reporting.

NEWS EDITORS' FORUM

A discussion forum was held for news editors to discuss road safety issues. The aim was for road safety stakeholders to meet with news editors to enlighten them on current road safety issues while answering road safety questions from the news editors.

STRATEGIC COMMUNICATION WORKSHOP

A two-day strategic communication workshop for 26 participants drawn from national and subnational level agencies was held to strengthen the capacity of communication officers within stakeholder organizations to implement strong road safety mass media campaigns.

Safety Enhancement Works

As part of the Partnership for Healthy Cities, an initiative supported by Bloomberg Philanthropies in partnership with the World Health Organization and Vital Strategies, the Kumasi Metropolitan Assembly (KMA) conducted a speed infrastructure inventory on selected corridors. These corridors were identified as having high pedestrian activities, high frequency or risk of crashes and high vehicular speeds. The inventory identified speed infrastructure such as speed limit signs and speed calming infrastructure, whether it was present or absent at appropriate locations, and whether it was adequate to the location. Other road safety infrastructures were documented as well.

Key recommendations[11] were made for consideration, and the road agencies have implemented several infrastructure improvements to the Abrepo junction–Prempeh College stretch of the Western Bypass road. These include the following:

The intersection has been signalised to prevent vehicular/vehicular and vehicular/pedestrian conflicts. The signal timing and ample safety signage benefits crossing pedestrians.

The pedestrian crossing in front of Prempeh College has been signalised to enable exclusive crossing for pedestrians. This also has adequate safety signages.

Road lines and other directional signs have been added to indicate allowable directions to motorists.

Road lines and other directional signs have been marked to help motorists anticipate vehicular movement. Similar interventions have been implemented on the Sofoline to Kwadaso SDA hospital junction stretch of the Sunyani Road.

The pedestrian crossings at key locations on the stretch have been signalised to enable exclusive crossing for pedestrians. These also have adequate safety signages. Pedestrian crossing lines have been re-marked.

Road safety audit/inspection capacity building

A two-day capacity building workshop on road safety inspections and audits was organised for participants from the Metro Roads Department, Department of Urban Roads, Department of Transport — KMA, Ghana Highways Authority, National Road Safety Authority and the Metro Works Department. This was in collaboration with the World Resources Institute (WRI).

A section of participants at the workshop.

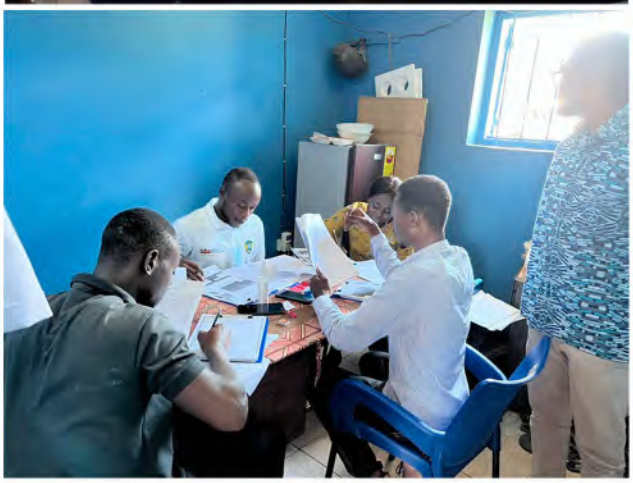
Speed Management Workshop

A two-day workshop on speed management was organised for a selection of 35 participants from stakeholder agencies in the city. WRI presented various road safety best practices and components of speed management.

A section of participants at the workshop.

ROAD INJURY SURVEILLANCE SYSTEM STRENGTHENING

National service personnel were trained in the extraction of data from police paper records. The data were entered at the Department of Transport, KMA.



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11. Speed Infrastructure Inventory Report – March 2021

APPENDICES

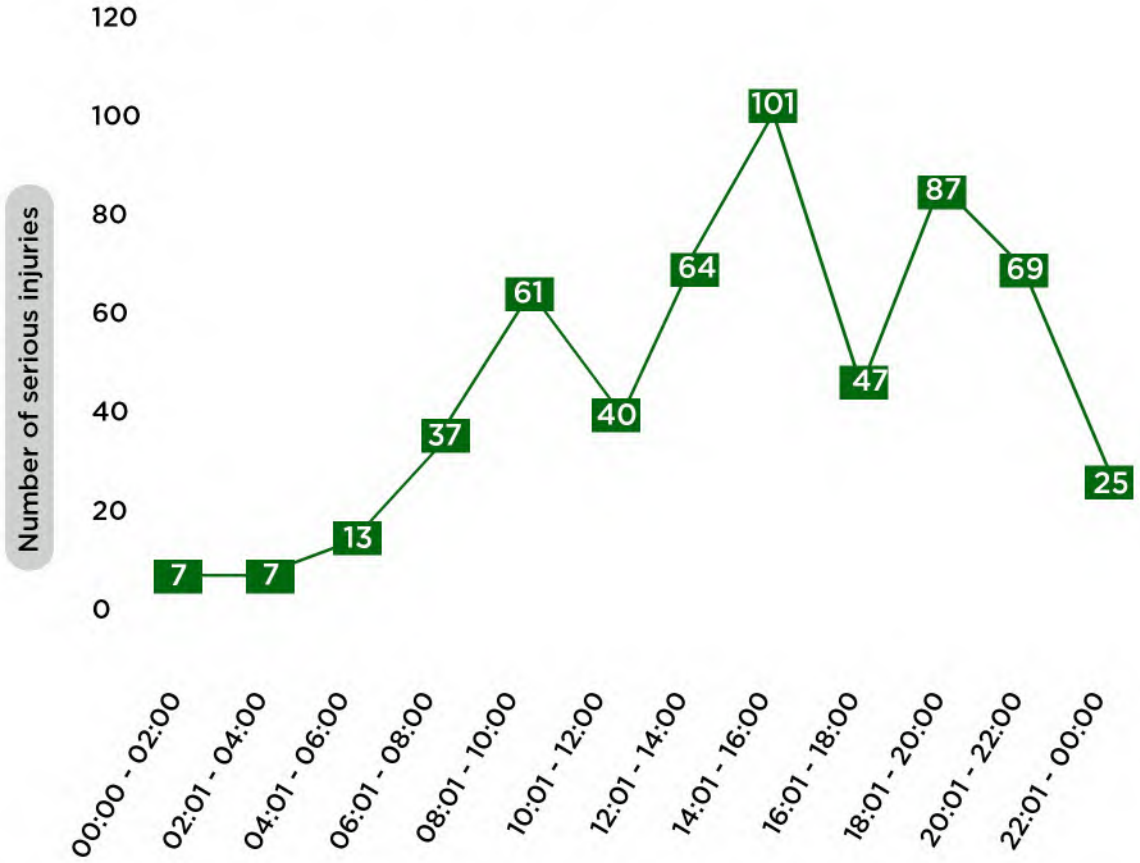
Deaths by pedestrian manoeuvre

Vechile	Crossing	Walking/standing on road side	Other
Car	12	3	11
Bus	1	1	0
High goods vehicle	4	3	9
Minibus	14	3	8
Motorcycle	4	0	0
Pickup	3	0	1
SUV (4x4)	3	1	4
Tricycle	2	0	2
Unknown/other	1	1	4
Total	44	12	39

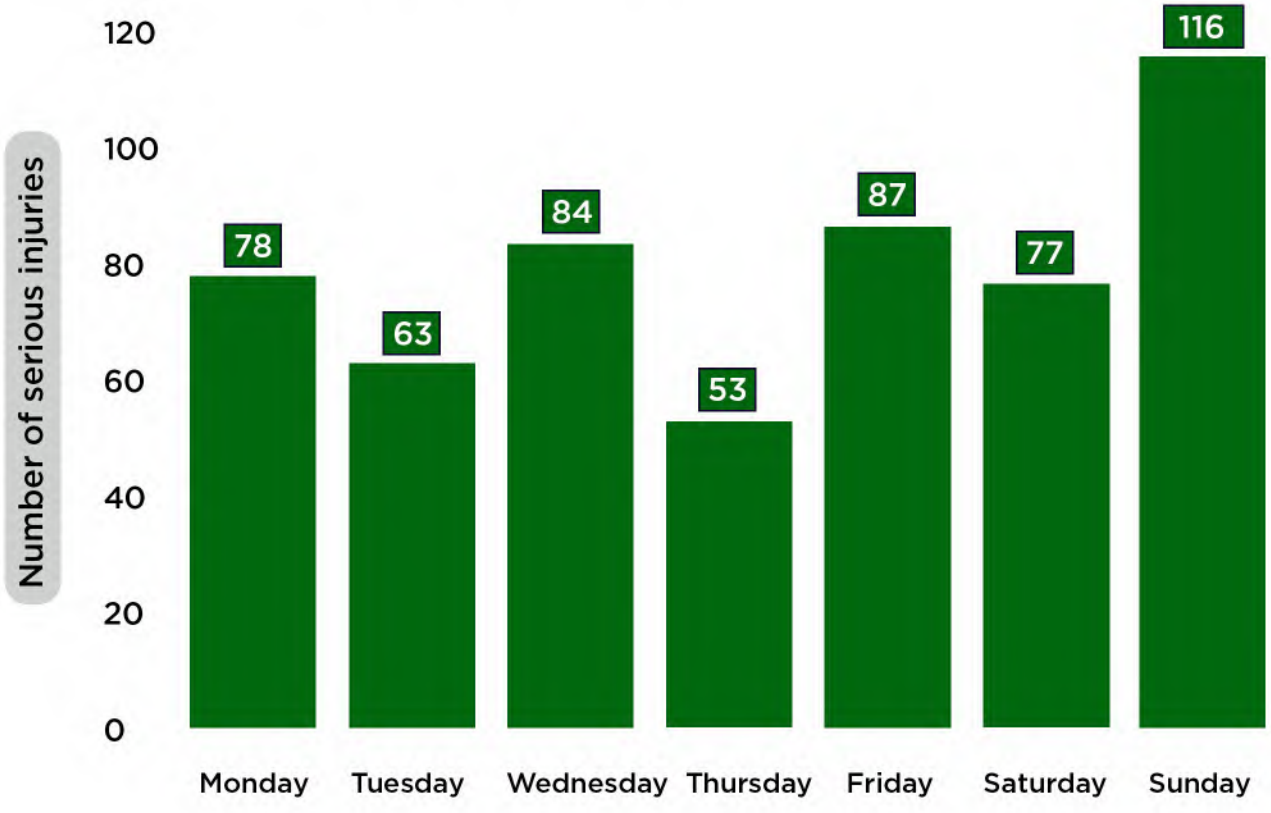
Crashes by causal vehicle, 2021

Vehicle causal type	Crashes
Car	401
Bus	21
High goods vehicle	216
Minibus	291
Motorcycle	86
Pickup	62
SUV (4x4)	81
Tricycle	72
Bicycle	3
Unknown/other	22
Total	**1,255**

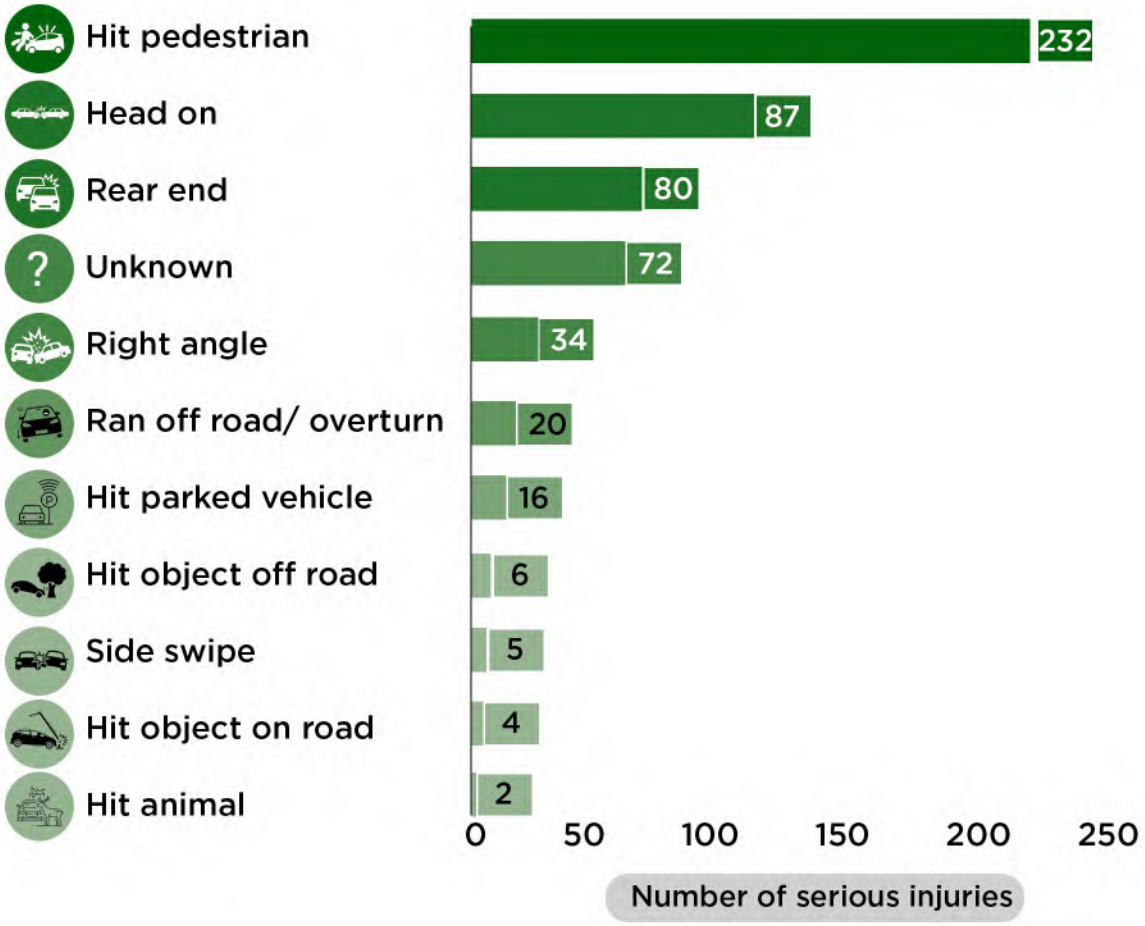
Serious injuries by time of day, 2021



Serious injuries by day of week, 2021



Serious injuries by collision type, 2021

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