



### Trend Analysis: Road Safety In Pune City (2019-2022)







### **Executive Summary**

Road crashes are a preventable cause of death and disability. Road crash injuries are in the top 10 leading causes of death in India, and they pose a significant threat to the lives of the people in Pune. The Pune District has partnered with the Bloomberg Philanthropies Initiative for Global Road Safety since 2022 to reduce the toll of death

and injuries on the roads. Good data that describe when, where, how, and why serious crashes occur are key to prevention efforts. With these data in hand, sustained targeted action can be initiated at highest risk locations and groups to achieve a greater impact. This report summarizes data for four years—2019 to 2022—in Pune City.

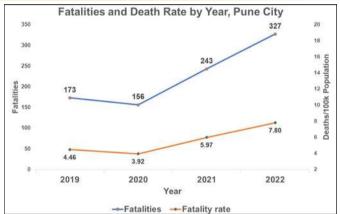
**Key Findings** 

## Road fatalities increased above pre-pandemic numbers



Alarming increase in road crash fatality rates since 2019 ~ 89% increase

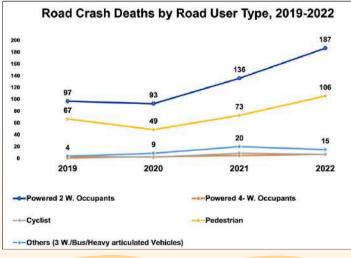
173 deaths in 2019 327 deaths in 2022





## Sharp increase in pedestrian and motorcyclist fatalities since 2019





Since 2019, fatalities of pedestrians and motorcyclists have increased 58% and 92%, respectively

Pedestrians 67 deaths in 2019 Pedestrians 106 deaths

in 2022

97 deaths in 2019

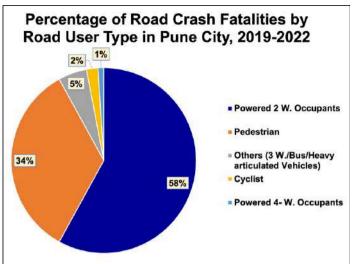
**Motorcyclists** 

Motorcyclists 187 deaths in 2022



## Pedestrians and Two-wheeler occupants are most vulnerable





Motorcyclists and pedestrians comprise 92% of all fatalities from 2019 to 2022

Pedestrians
34%

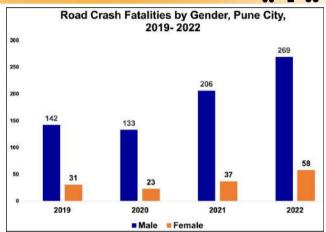
Motorcyclists
58%



# Majority of road crash fatalities involved men (83%) in all four years

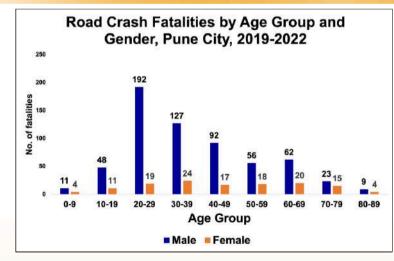


Since 2019, men and women fatalities have gone up by 89% and 87%, respectively



### 29% of deaths were among young men between ages 20 and 29





- 46% road crash victims are men in the age bracket 20-49
  - 23% of those died in crashes between 2019 and 2022 were those aged between 20-29

15% of the road crash fatalities recorded were of citizens over age 60

32% of the road crash fatalities were from 0-29 age group



## 59% of motorcycle crash fatalities involved men from 20 to 49 age bracket





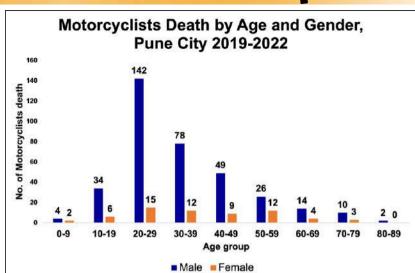
59% motorcyclist deaths were in the age bracket 20-49



39% of all fatalities were from 0-29 age group



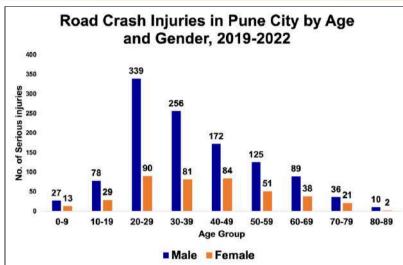
31% of total motorcyclist fatalities saw individuals aged between 20-29 as victims





# Young men and women at significant risk of road crash injuries





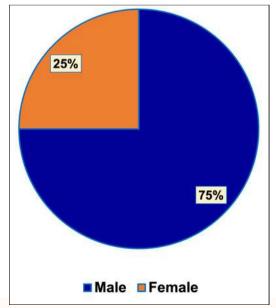


32% men and 9% women in age group 20-39 years sustained grievous injuries

10% of citizens above age 60 sustained severe injuries

While a majority of injuries involved men, women are also a significant risk when it comes to road crash injuries

One-fourth of all severe road crash injuries recorded between 2019-2022 involved women

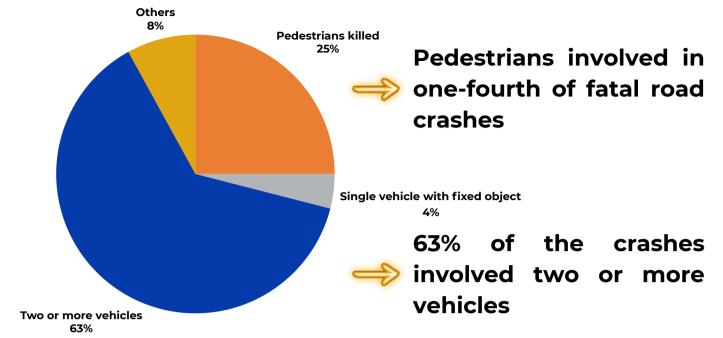


Percentage of Severe Injuries by Gender in Pune City, 2019-2022



### Fatal Road Crashes by Crash Type, Pune City, 2019-2022







### Youth and elderly vulnerable road users



#### 60-69 years

12.9

in 2022

#### 70+ years

10.6

in 2022

#### 40-49 years

9.7

in 2022

#### **30-39 years**

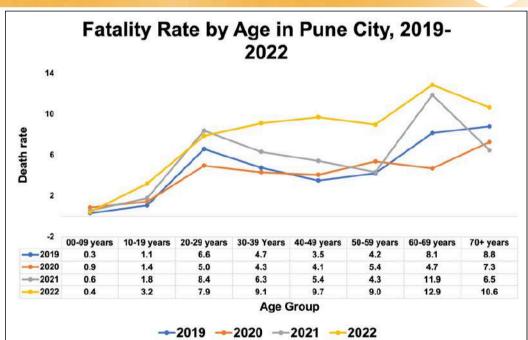
9.1

in 2022

#### 20-29 years

7.9

in 2022



Fatality rate is highest among 60-69 and 70+ years age group

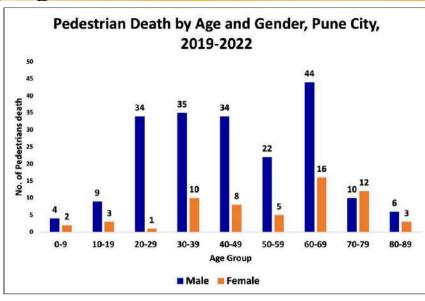
Death rate nearly doubled in 10-19 and 50-59 age groups between 2021 and 2022

Fatality rate witnessing a steady rise in the 10-19 and 40-49 age groups



#### Pedestrians at risk, especially the elderly





83% of pedestrian

⇒ fatalities were men
from 0-59 age group

31% of pedestrians ⇒ died in road crashes were above age 60

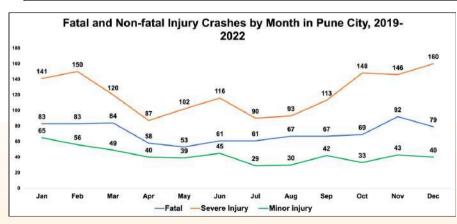
34% of pedestrian fatalities were women from 60-89 age group



#### **Crash Timeline**



Road Crashes by Time and Day of Week in Pune City, 2019-2022								
Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Grand Total
00:00-01:00	13	11	12	12	14	14	14	90
01:00-02:00	2	6	6	3	6	11	5	39
02:00-03:00	5	5	2	2	3	4	3	24
03:00-04:00	1	5	3	2	4	1	1	17
04:00-5:00	1	0	4	5	2	1	2	15
05:00-06:00	3	0	5	3	0	3	0	14
06:00-07:00	4	3	6	2	6	4	5	30
07:00-08:00	2	4	3	3	3	4	6	25
08:00-09:00	2	5	0	3	5	7	3	25
09:00-10:00	7	7	1	4	7	3	3	32
10:00-11:00	10	2	6	5	1	3	2	29
11:00-12:00	10	4	7	7	5	7	5	45
12:00-13:00	6	11	1	6	6	5	9	44
13:00-14:00	7	2	1	6	3	3	6	28
14:00-15:00	4	8	4	4	9	5	6	40
15:00-16:00	3	4	7	2	5	1	1	23
16:00-17:00	4	6	4	5	4	6	4	33
17:00-18:00	6	3	9	5	8	1	7	39
18:00-19:00	3	8	2	8	4	6	8	39
19:00-20:00	7	3	2	7	3	7	5	34
20:00-21:00	6	8	10	8	7	6	7	52
21:00-22:00	5	3	7	3	7	7	11	43
22:00-23:00	6	6	9	6	6	4	10	47
23:00-24:00	6	8	4	6	6	10	10	50
Total	123	122	115	117	124	123	133	857



30% of crashes recorded were on the weekends

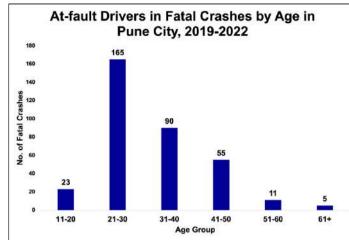
16% of crashes occurred between 11 pm and 1 am

November recorded 11% of the total fatal crashes. While February, October, November and December saw 41% of crashes with severe injuries.



#### **Driver details**







33% of drivers who were at fault in the fatal crashes were in 21-30 age group



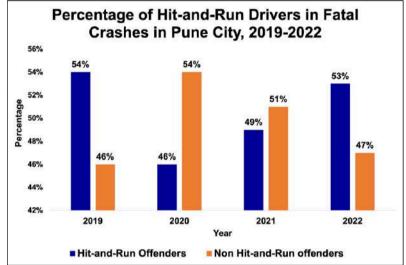
One minor committed a fatal crash



#### Hit-and-Runs on the rise



- Hit-and-Run cases in 2022 on the rise from previous two years
- 53% of the fatal crashes in 2022 were hit-and-run cases
- Nearly 50% of fatal crashes were hit-and-run cases between 2019 and 2022
- Hit-and-run cases saw a marginal
   dip in 2020 due to the pandemic,
   but on an upward trend since





#### Who hit whom matrix



At fault vehicles and fatal crash victim road users types in Pune city, 2019-2022							
Victim road user  At fault Vehicle	Bicycle	Heavy Vehicle Truck/Bus	Light Vehicle	Motorbike	Others/Single vehicle Crash	Pedestrian	Grand Total
Auto rickshaw	2	1	0	9	6	6	24
Bus	3	2	0	33	4	28	70
Motorbike	1	15	6	36	92	52	202
Car/Jeep/Taxi/Van/S UV	2	4	6	55	6	48	121
Moderate Heavy vehicle	6	7	8	80	7	38	146
Heavy articulated vehicle/Trolly	3	5	4	91	5	27	135
Unknown	5	2	1	65	5	75	153
Grand Total	22	36	25	369	125	274	851



### **Top blackspots in Pune City**



Rank	Location	Fatal Crashes	Grievous Injury Crashes	Total Crashes	Total fatalities
1	Opposite Hadapsar Police Station, Pune-Solapur Road	12	16	28	12
2	Katraj Chowk, Pune-Satara Road	11	14	25	12
3	Navale Bridge Bus Stop, Pune Mumbai Bypass Road	11	09	20	11
4	Warje Flyover, Near NDA Road, Pune- Mumbai Bypass Road	06	09	15	06
5	Wagholi Avhalwadi Phata, Pune Ahmednagar Road	09	05	14	09
6	Opposite Tekawade Petrol Pump, near Akashwani, Pune Solapur Road	11	02	13	11
7	Opposite Hotel Gaurav, Katraj Ghat Road, Pune -Satara Highway	08	05	13	09
8	Perne Phata, Pune-Ahmednagar Road	10	02	12	10
9	Opposite Vishwaraj Hospital, Lonikalbhor, Pune-Solapur Road	06	06	12	06
10	Opposite Setu Builders, Hadapsar, Pune-Solapur Road	06	06	12	06
11	Mundhwa Chowk, Ghorpadi Road	05	07	12	05
12	Opposite Shewalewadi Bus Stand, Pune - Solapur Road	06	04	10	06
13	Opposite Hotel Sai Vikram, Airport Road	05	05	10	05

Rank	Location	Fatal Crashes	Grievous Injury Crashes	Total Crashes	Total fatalities
14	Near SBI Lonikalbhor, Pune-Solapur Road	08	01	09	09
15	Urali Kanchan Phata, Pune Solapur Road	06	03	09	06
16	Near Wagholi Bus Stop, Pune- Ahmednagar Road	05	04	09	05
17	Laxmi Narayan Chowk, under bridge, Swargate, Pune-Satara Road	05	04	09	05
18	Tulapur Phata/Phulgaon Phata, Lonikand, Pune-Ahmednagar Road	07	01	08	08
19	Near HPCL Loni Guest House, Pune- Solapur Road	05	03	08	07
20	Opposite Bharat Petroleum Pump, Alfa Service Station, Naigaon, Pune- Solapur Road	06	01	07	06



### What is a blackspot



According to the Ministry of Road Transport and Highways, a black spot is a stretch of road of about 500m in length in which either five road accidents (in all three years put together involving fatalities/grievous injuries) took place during the last three calendar years or 10 fatalities (in all three years put together) took place during the last three calendar years.

The definition of MoRTH was used to identify the blackspots; data from 2019 was added to account for the lack of mobility in 2020.

#### **Heat Map of Crash Spots In Pune City, 2019-2022**

