

Research Evidence on Pedestrian Safety Concerns

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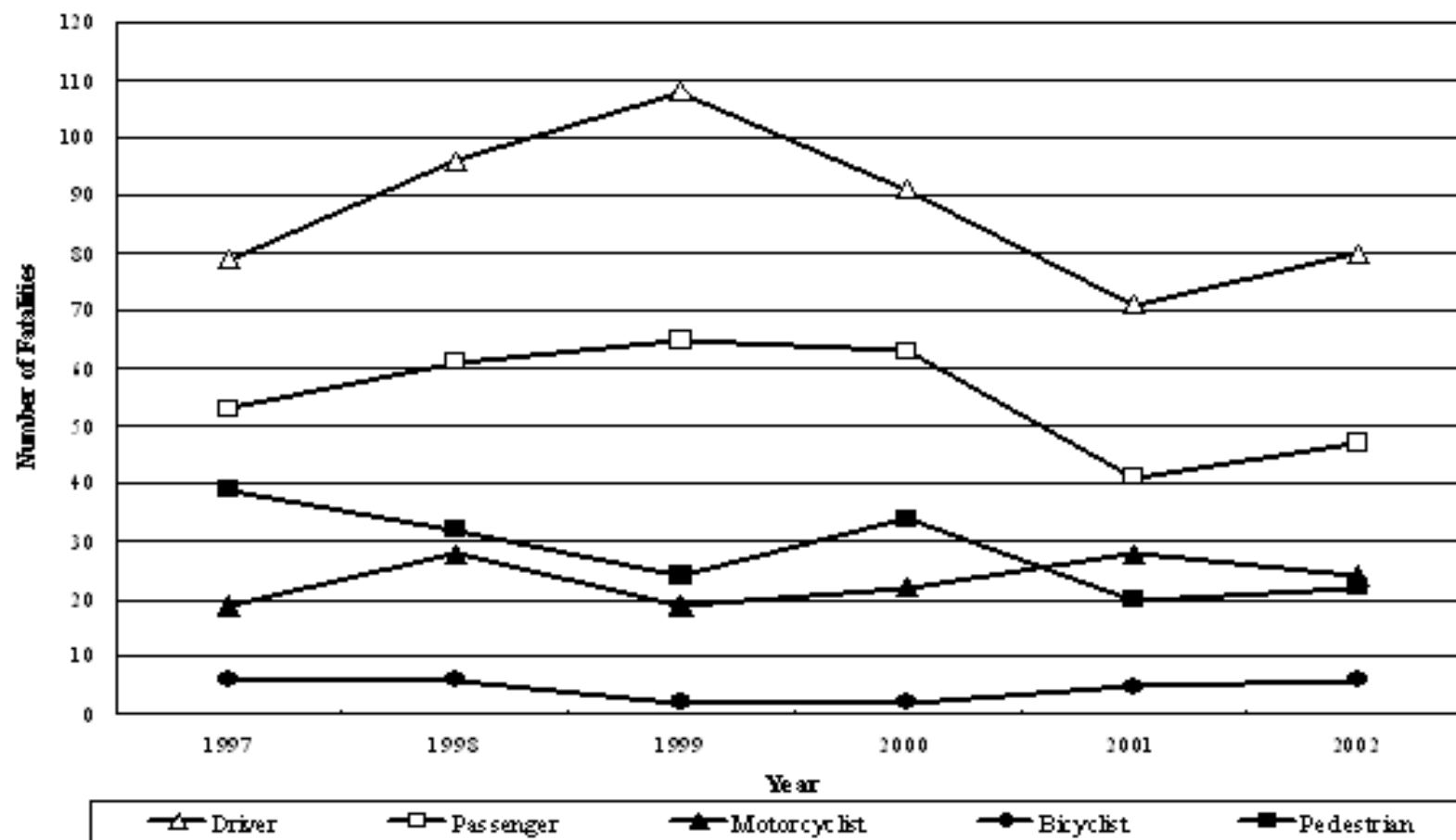
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Statistics on Pedestrian Injuries

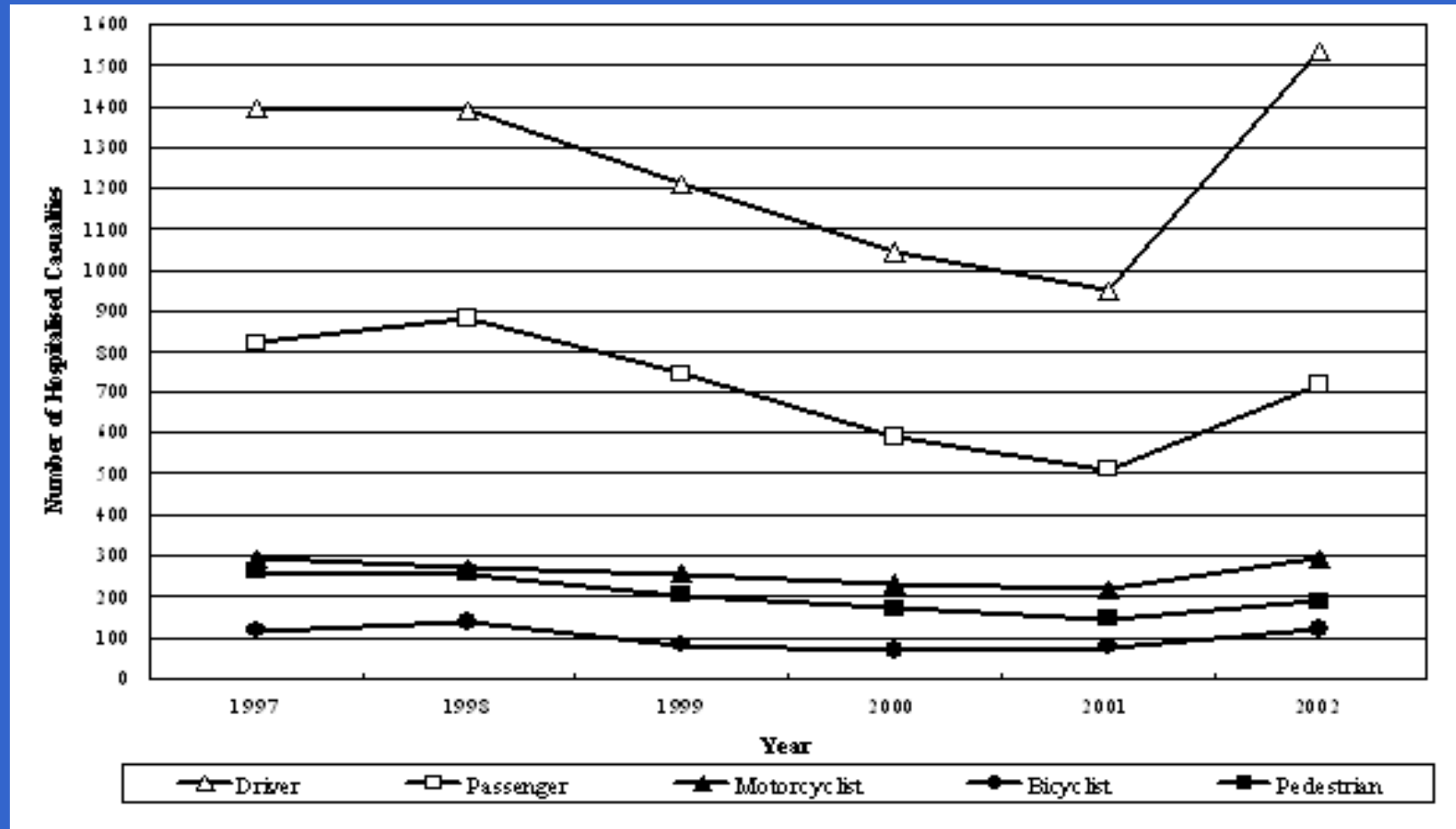
In WA each year:

- 20 fatalities
- 200 hospitalised
- 50% of all pedestrian fatalities have BAC over 0.05

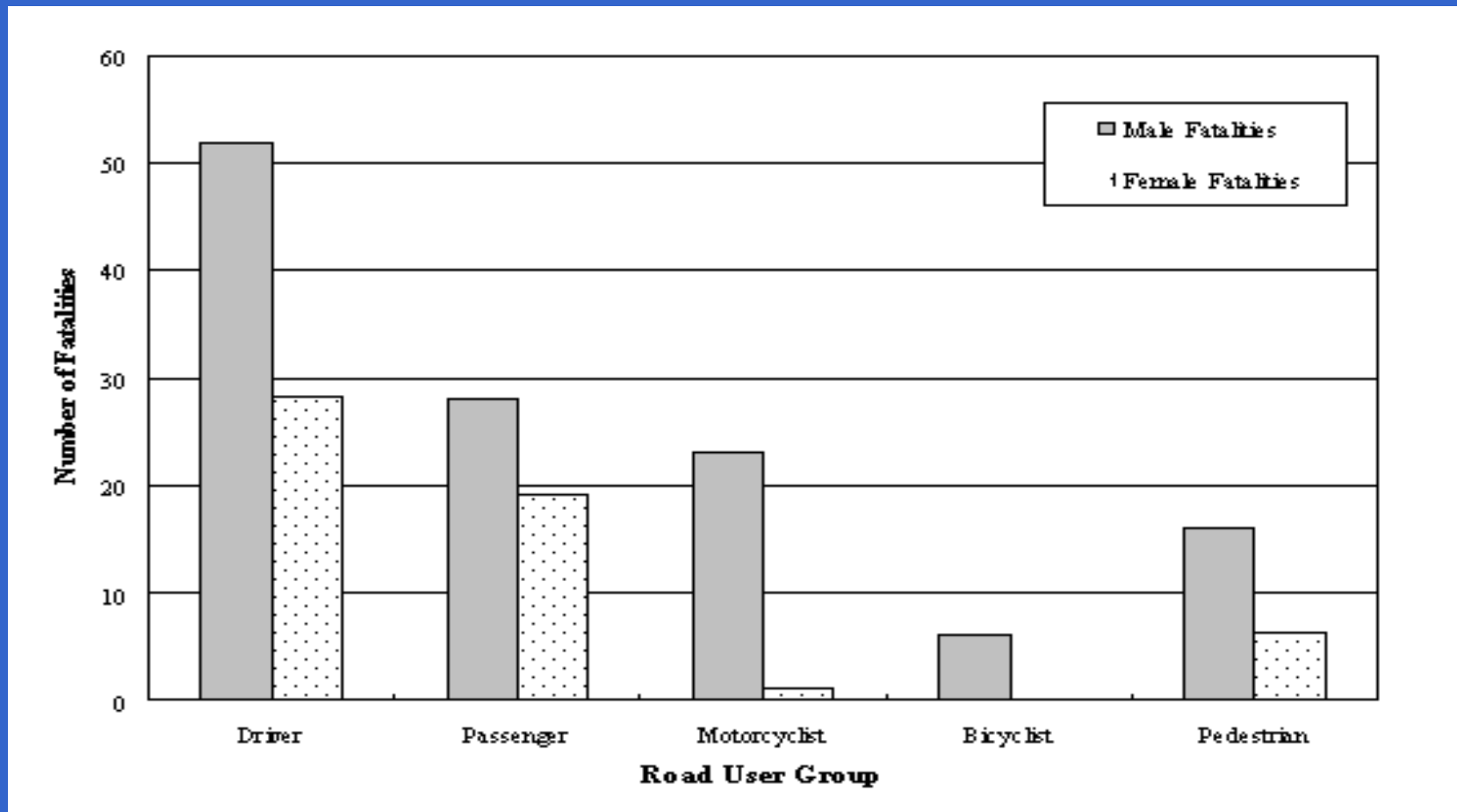
Fatality Trends by Road User Group



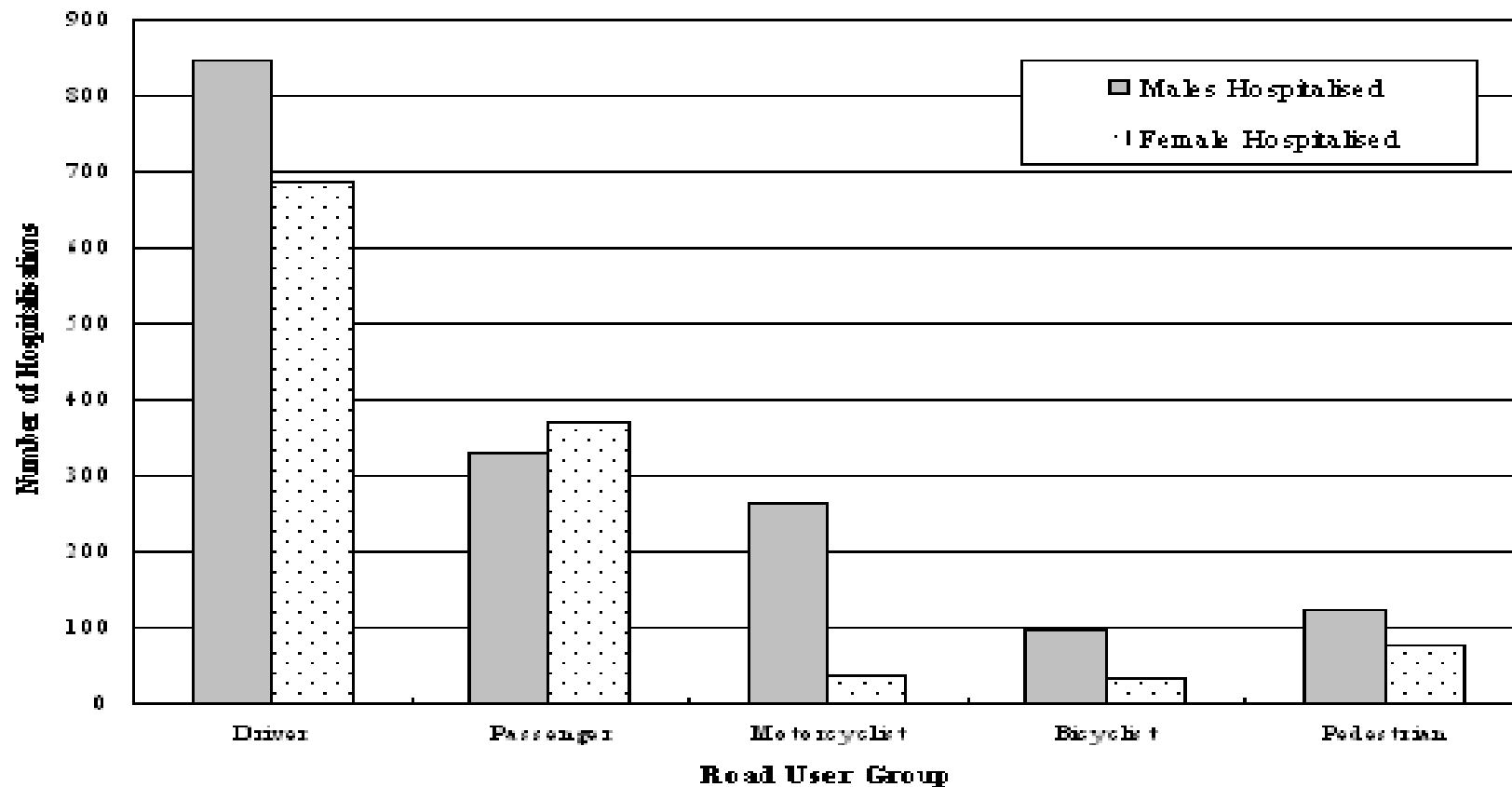
Hospitalisation Trends by Road User Group



Fatalities by Road User Group and Gender



Hospitalised Casualties by Road User Group and Gender



Pedestrian Fatalities by Area of Crash, Age Group and Gender

Age Group	Metropolitan		Rural		Western Australia		Total	Total
	Male	Female	Male	Female	Male	Female	2002	2001
	n	n	n	n	n	n	n	n
0 – 5	0	0	0	0	0	0	0	0
6 – 11	0	1	0	0	0	1	1	0
12 – 16	0	0	1	1	1	1	2	2
17 – 20	3	1	0	0	3	1	4	2
21 – 24	0	0	0	0	0	0	0	3
25 – 29	3	0	1	1	4	1	5	1
30 – 39	0	0	1	0	1	0	1	3
40 – 49	0	0	1	1	1	1	2	3
50 – 59	3	0	1	1	4	1	5	1
60 – 69	1	0	0	0	1	0	1	0
≥ 70	1	0	0	0	1	0	1	5
Total	11	2	5	4	16	6	22	20

Hospitalised Pedestrians by Area of Crash, Age Group and Gender

Age Group	Metropolitan		Rural		Western Australia		Total ¹	Total ²
	Male	Female	Male	Female	Male	Female	2002	2001
	n	n	n	n	n	n	n	n
0 – 5	4	2	3	1	7	3	10	13
6 – 11	5	2	2	0	7	2	9	11
12 – 16	14	6	2	2	16	8	24	12
17 – 20	11	5	2	3	13	8	21	11
21 – 24	7	2	3	1	10	3	13	10
25 – 29	2	5	3	2	5	7	12	10
30 – 39	16	0	6	2	22	2	24	21
40 – 49	11	7	1	5	12	12	24	16
50 – 59	3	0	0	0	3	0	3	5
60 – 69	2	6	0	0	2	6	8	9
≥ 70	11	8	1	0	12	8	21	12
Unknown	11	6	3	2	14	8	22	15
Total	97	49	26	18	123	67	191	145

1. Total for 2002 includes n=1 metropolitan casualty where gender was unknown.
2. Total for 2001 includes n=1 rural casualty where gender was unknown.

Safety Issues for Pedestrians

- Older Pedestrians
 - 60 years and over over-represented in statistics
 - Declining vision
 - Declining speed judgement
 - Poor balance control
 - Slower walking speeds
 - Confusion with pedestrian signals
- Young pedestrians
 - Harder for drivers to see
- Alcohol-Affected Pedestrians
 - Predominantly male
 - Under the age of 25
 - Night time
 - Weekends

Countermeasures

Traffic Engineering

- Reduce traffic volumes
- Reduce traffic speeds
- Modify the design of roads
- Extend pedestrian walk times
- Reduce the degree of vehicle queuing by reducing linked signal system cycle times

Road Engineering

- Reduce road widths and widen footpaths to simplify the road crossing task
- Provide medians to assist pedestrians over the entire length of a hazardous route, rather than localised treatments
- Install fencing to encourage pedestrians to cross at signals rather than other high risk areas
- Provide skid resistant pavements to improve braking capabilities
- Improve street lighting

Strategic Planning Measures

- Develop local government planning strategies for strip shopping centres
- Develop a range of treatments for common pedestrian crash circumstances
- Develop municipal pedestrian safety strategies

Publicity and Behavioural Change

- Educate all users of a particular route about the specific risks
- Target local hotels and pubs to introduce alcohol intervention programs
- Warn drivers of the hazards to pedestrians by erecting signs

Police Enforcement

- Target dangerous overtaking behaviour by drivers during congested periods
- Target driver compliance with speed
- Target pedestrian compliance with intersection and pedestrian operated signals
- Target dangerous crossing behaviour by intoxicated pedestrians

Vehicle-Based Countermeasures

- Modify vehicle frontal design to improve compatibility with pedestrians in impact
- Daytime running lights
- Discourage tinted vehicle windscreens (a problem at night)

Conclusion

- Need a combination of these measures to improve pedestrian safety