
Child Road Injuries: Gauteng Status Quo

Aliasgher Janmohammed (Ali)

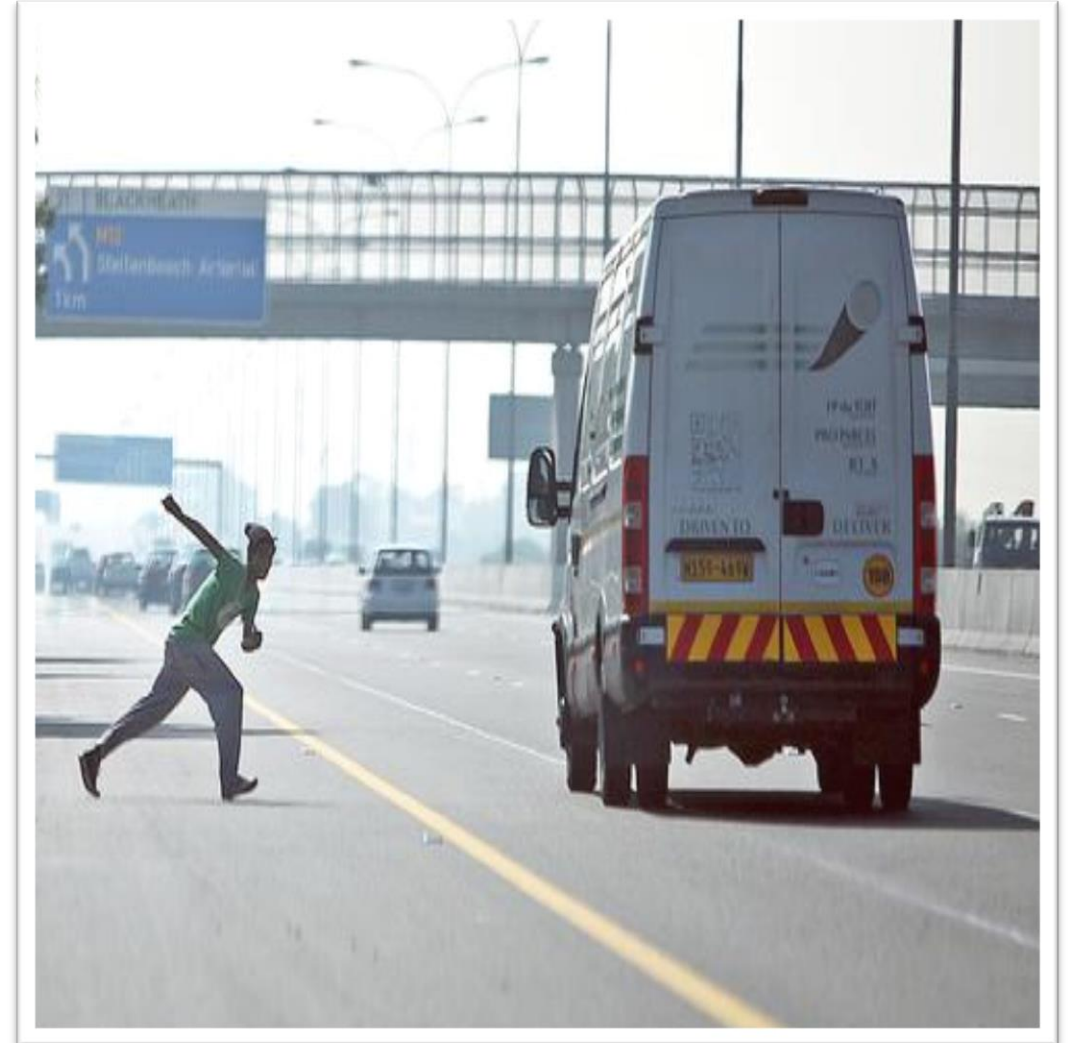


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Background

- Why focus on children¹?
- 1) It is disturbing that children are not safe on our roads



1. Someone under the age of 18 years (Convention on the Rights of a Child, 1989)

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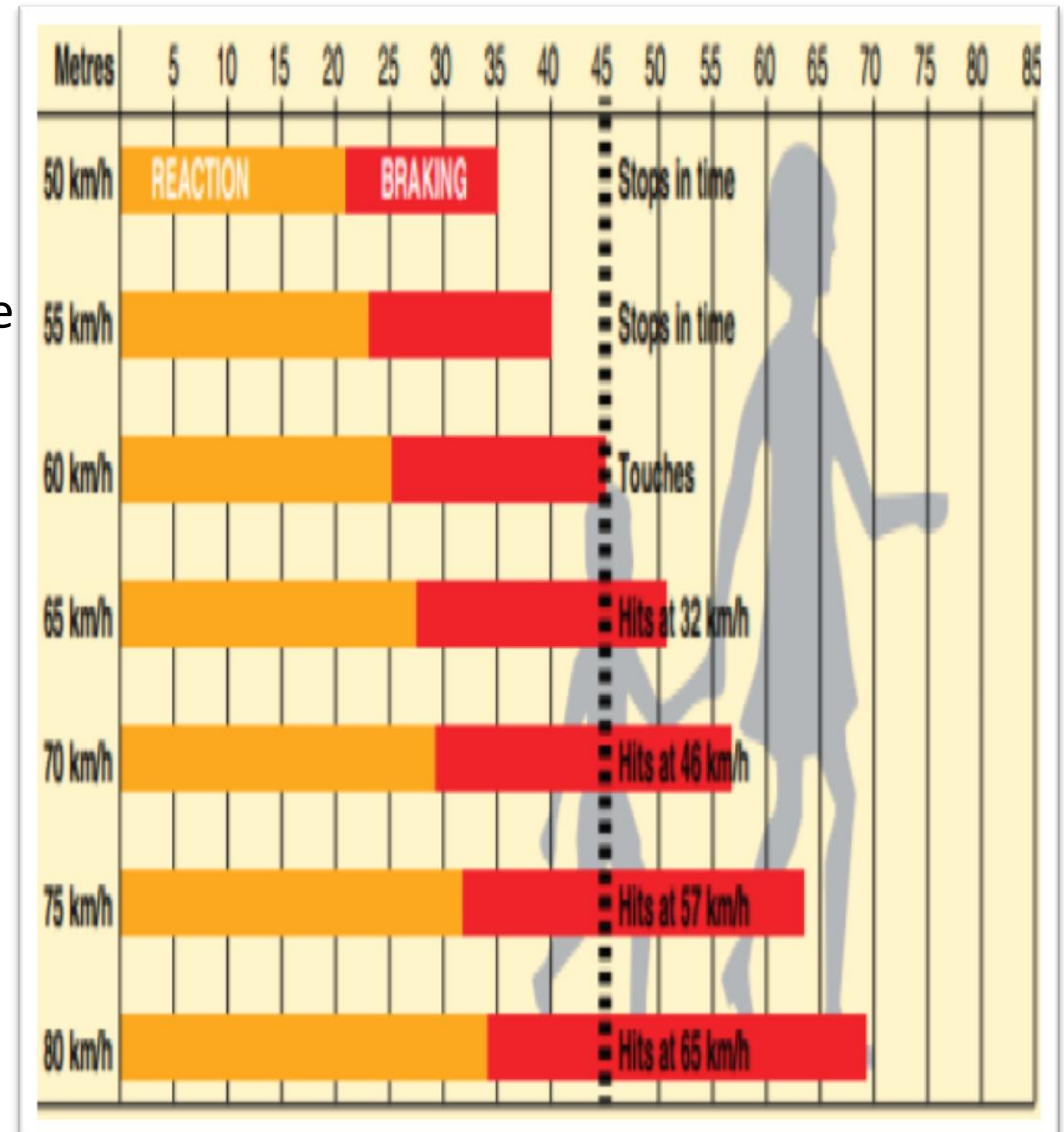
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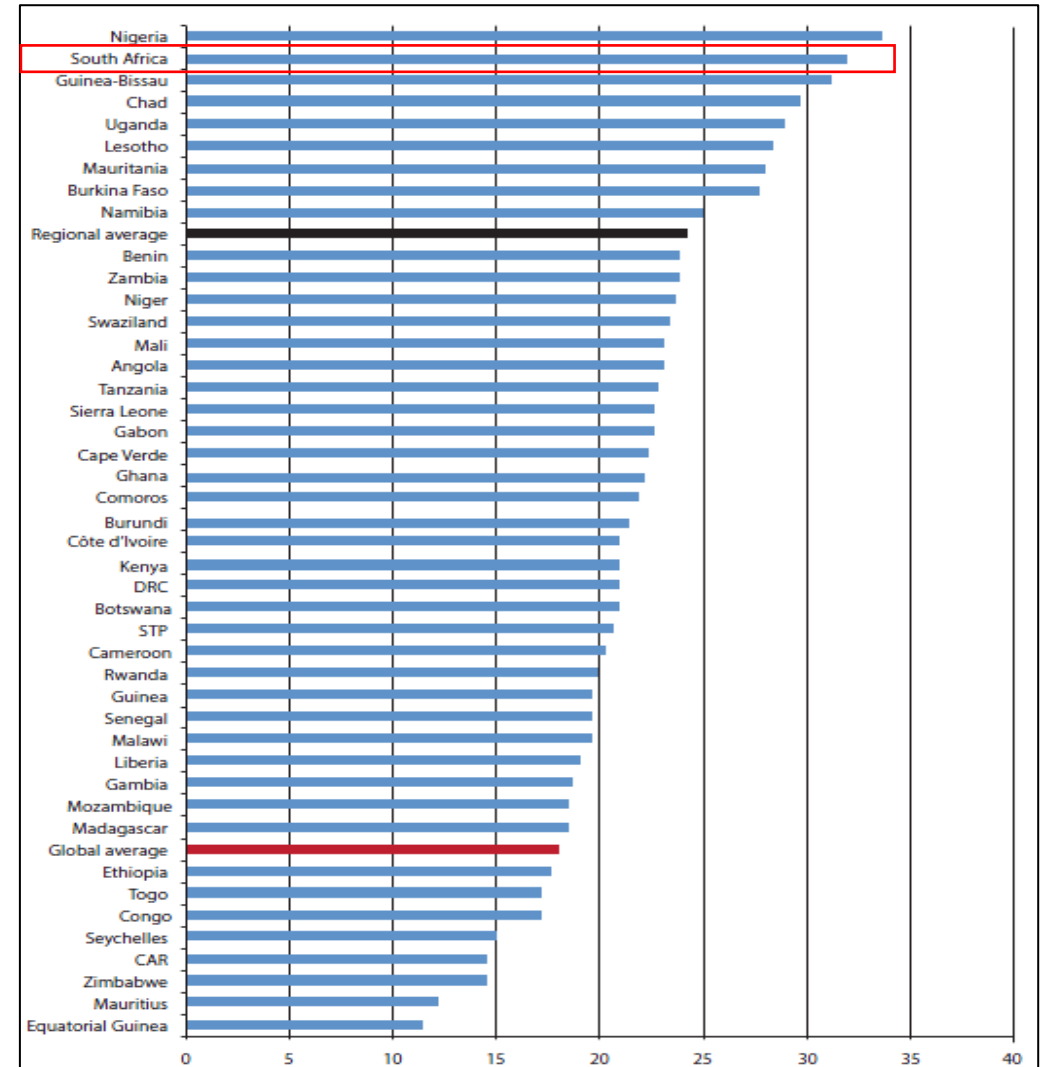
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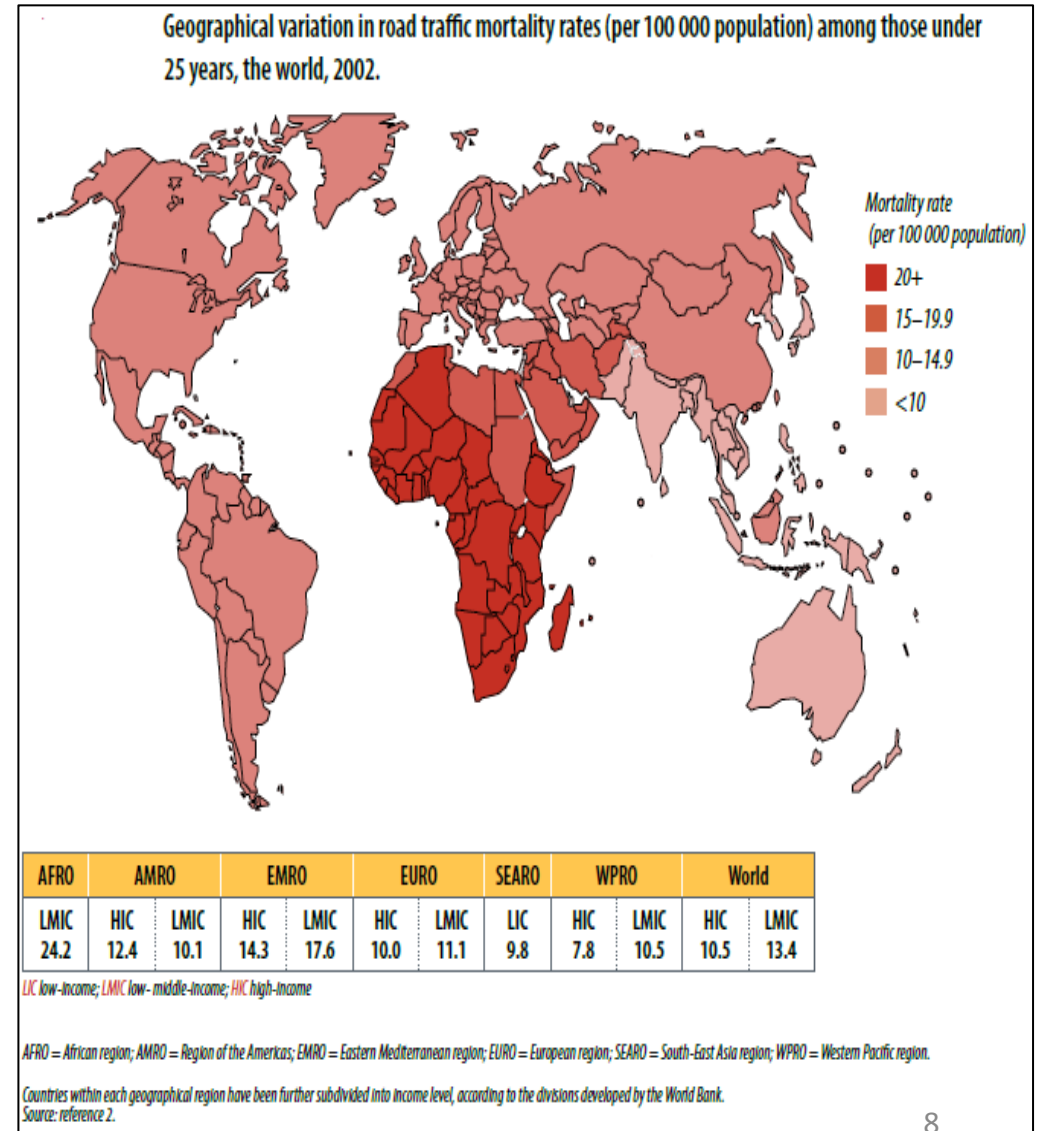
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- South Africa has:
 - 1) High road fatality rate per 100 000 population



Source: Peden et al. (2013)

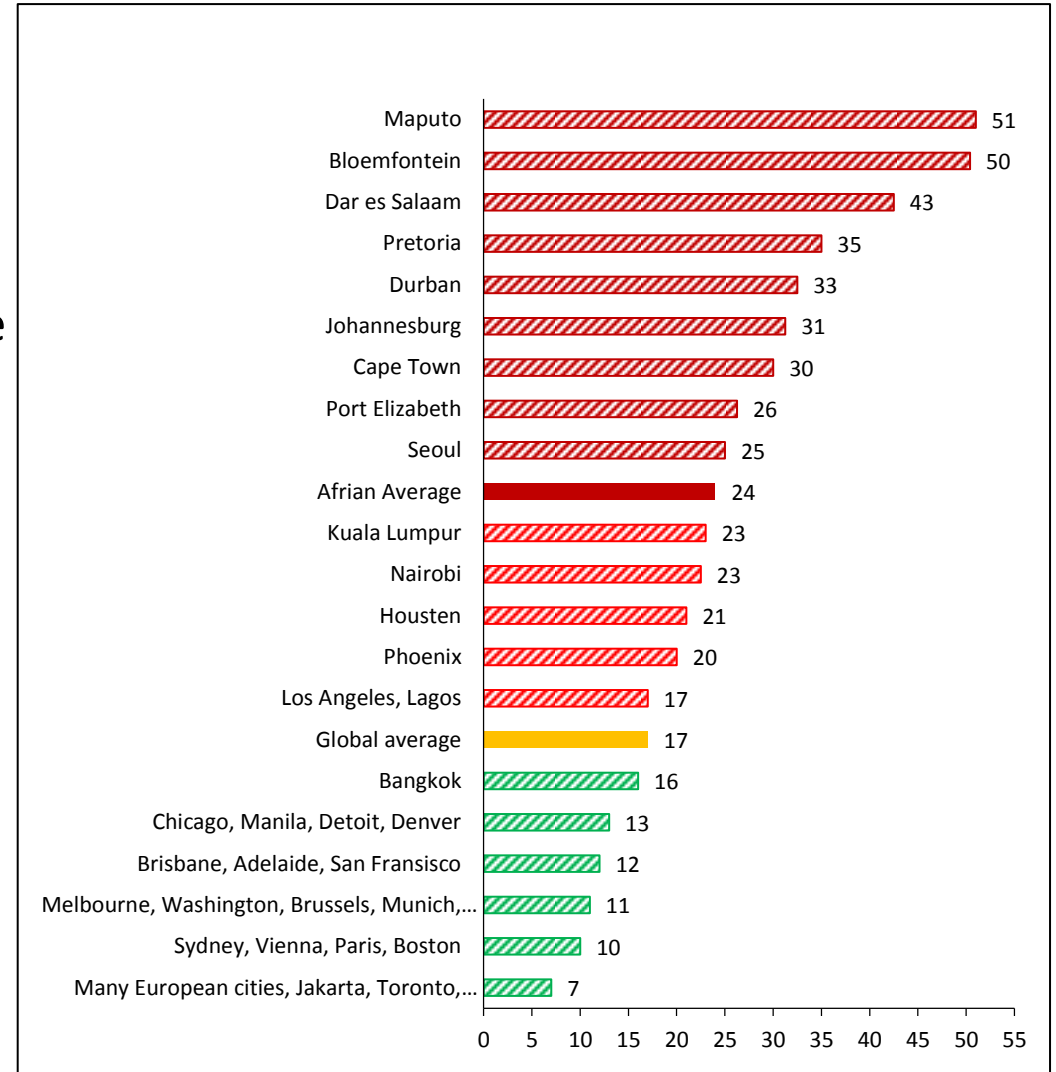
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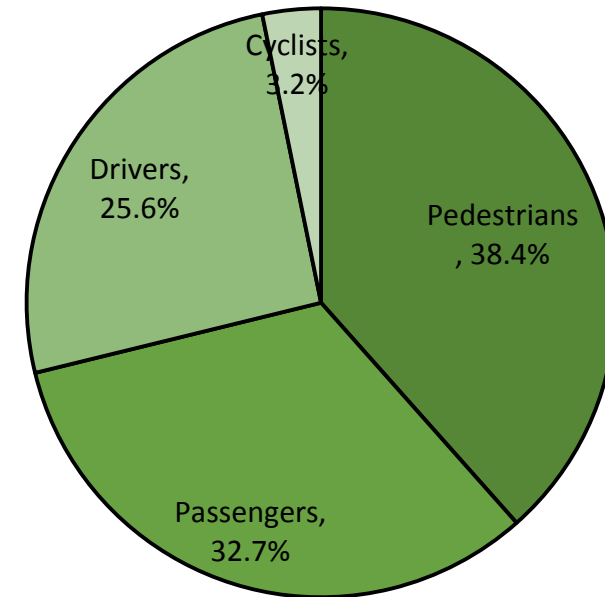
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Source: Vanderschuren and Zuidgeest (2017)

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 - 4) Pedestrians still the victims because of lack of adequate infrastructure

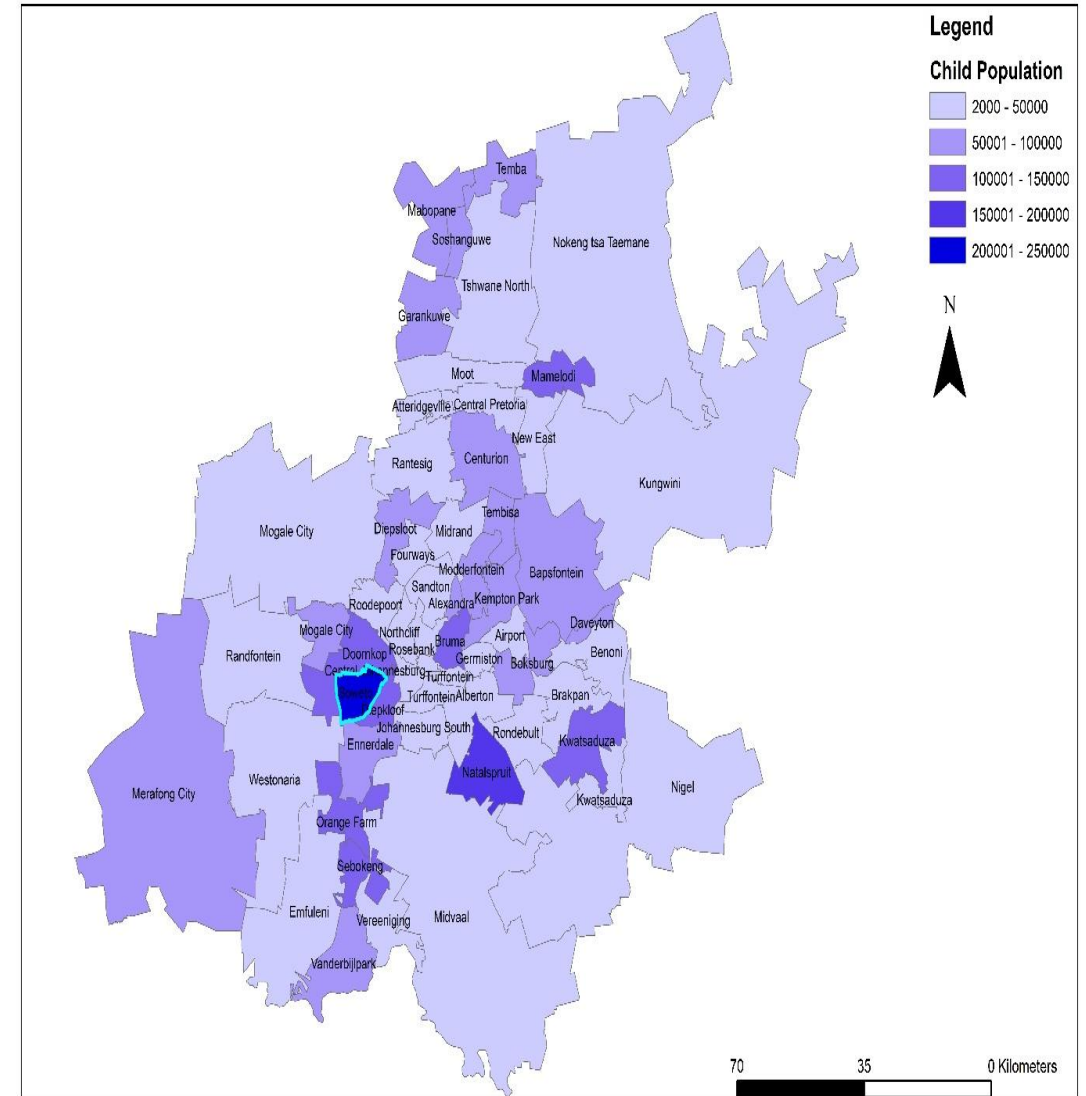


Data Source: RTMC, 2016

Demographics and Travel Statistics

Population

- Child Population (approximately 3,4 million children)

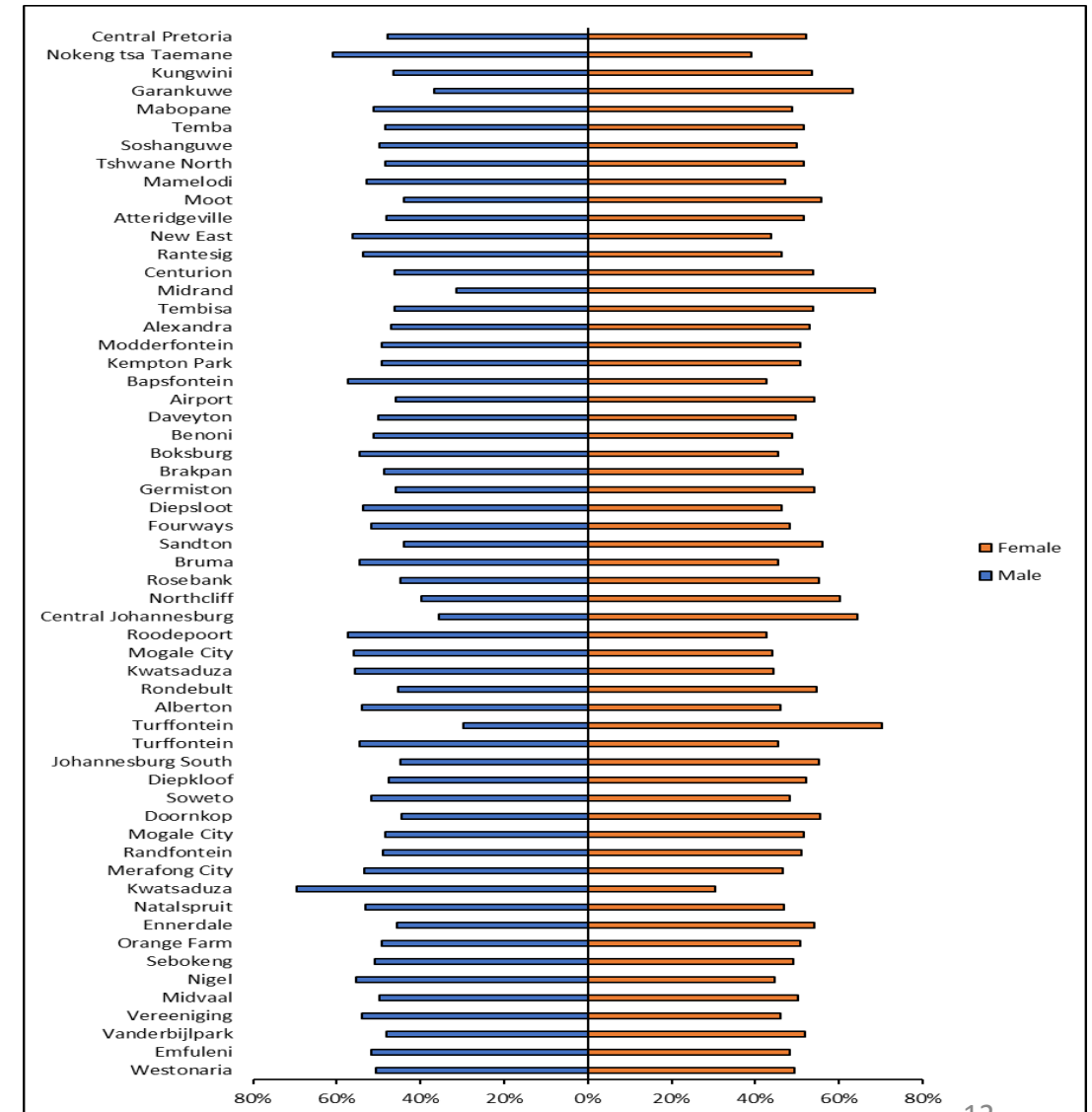


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Demographics and Travel Statistics

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- Male vs Female Child Population
 - Statistics show that male children are more vulnerable



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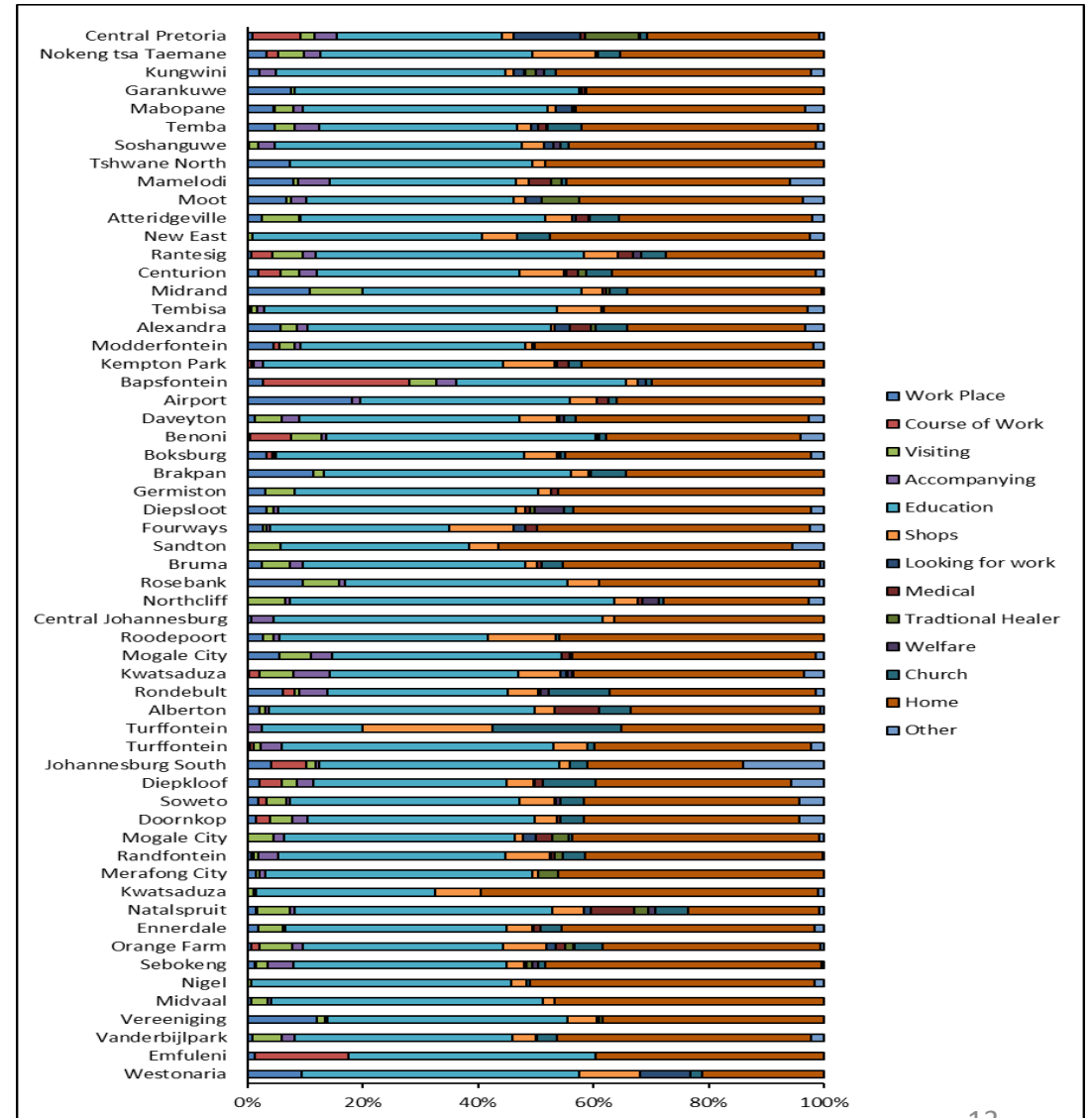
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- Education trips the majority



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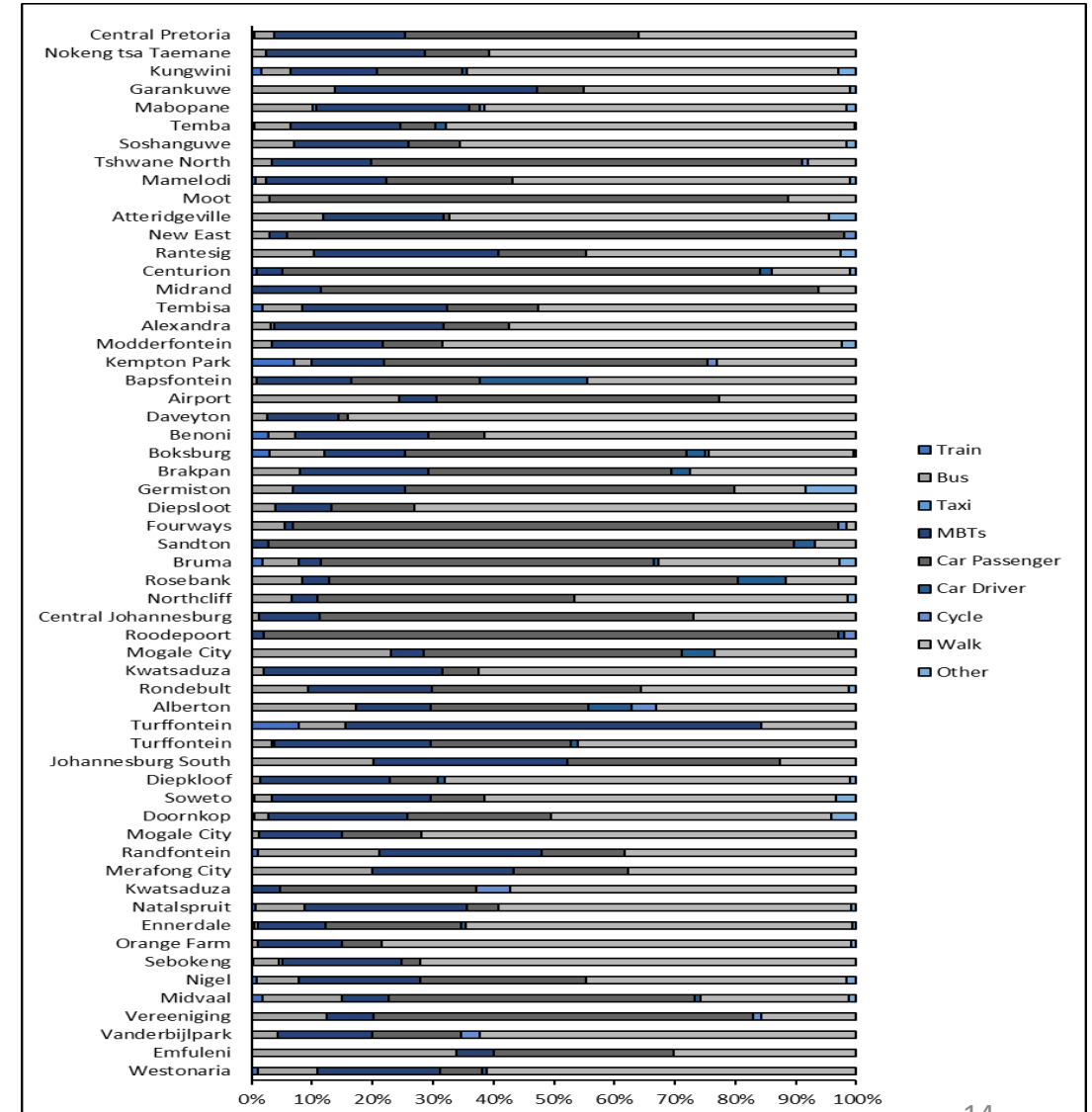
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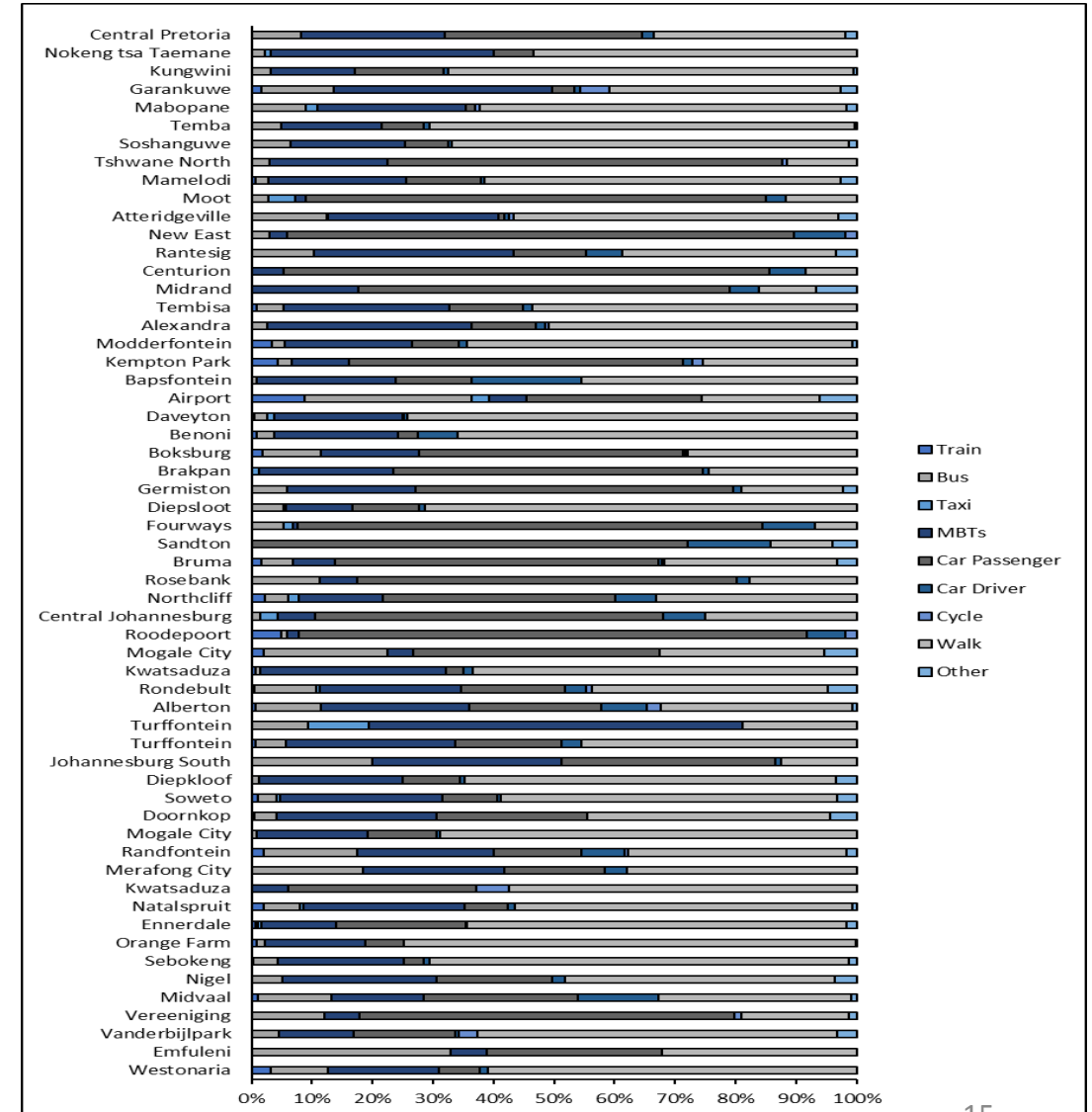
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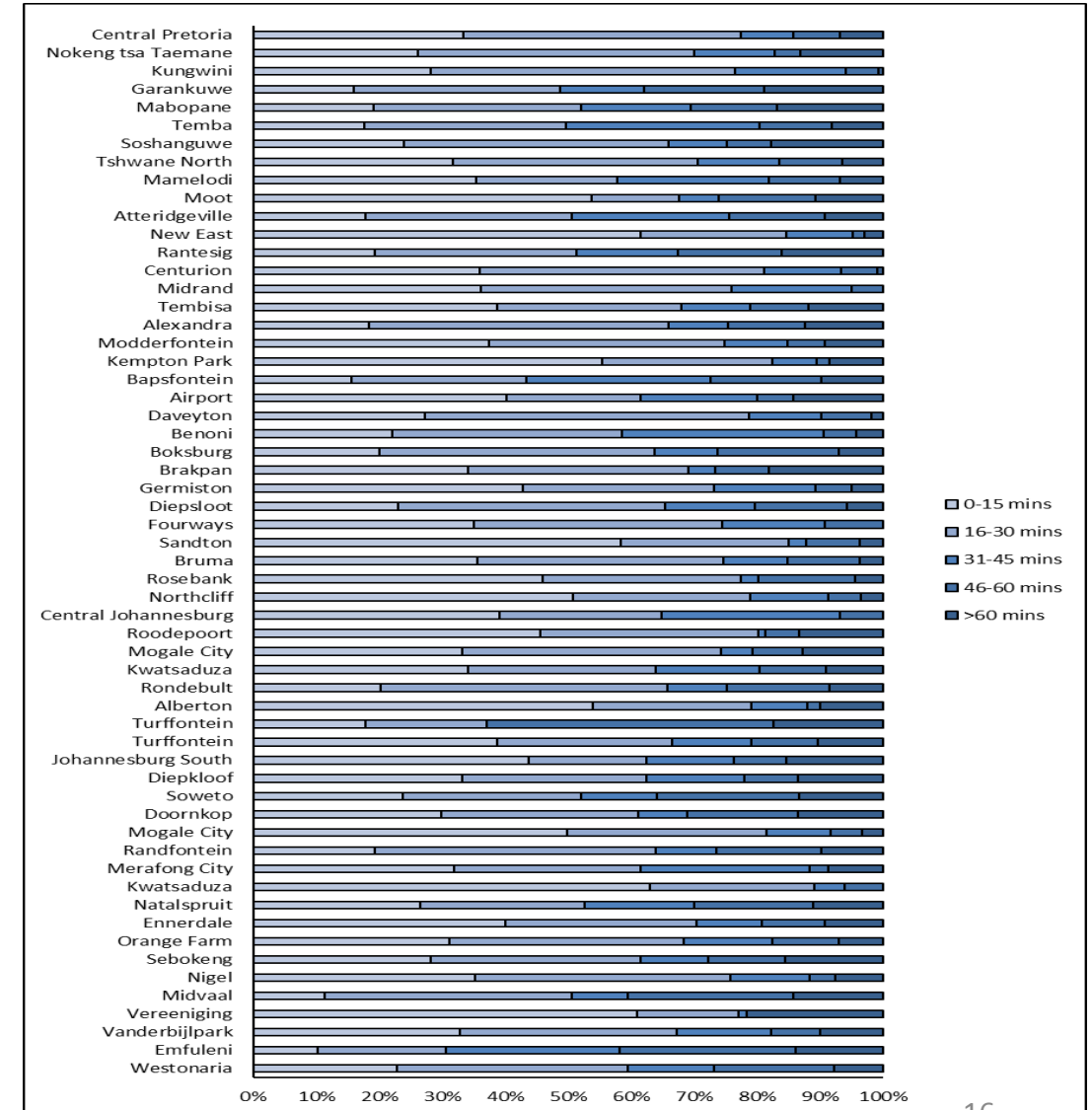
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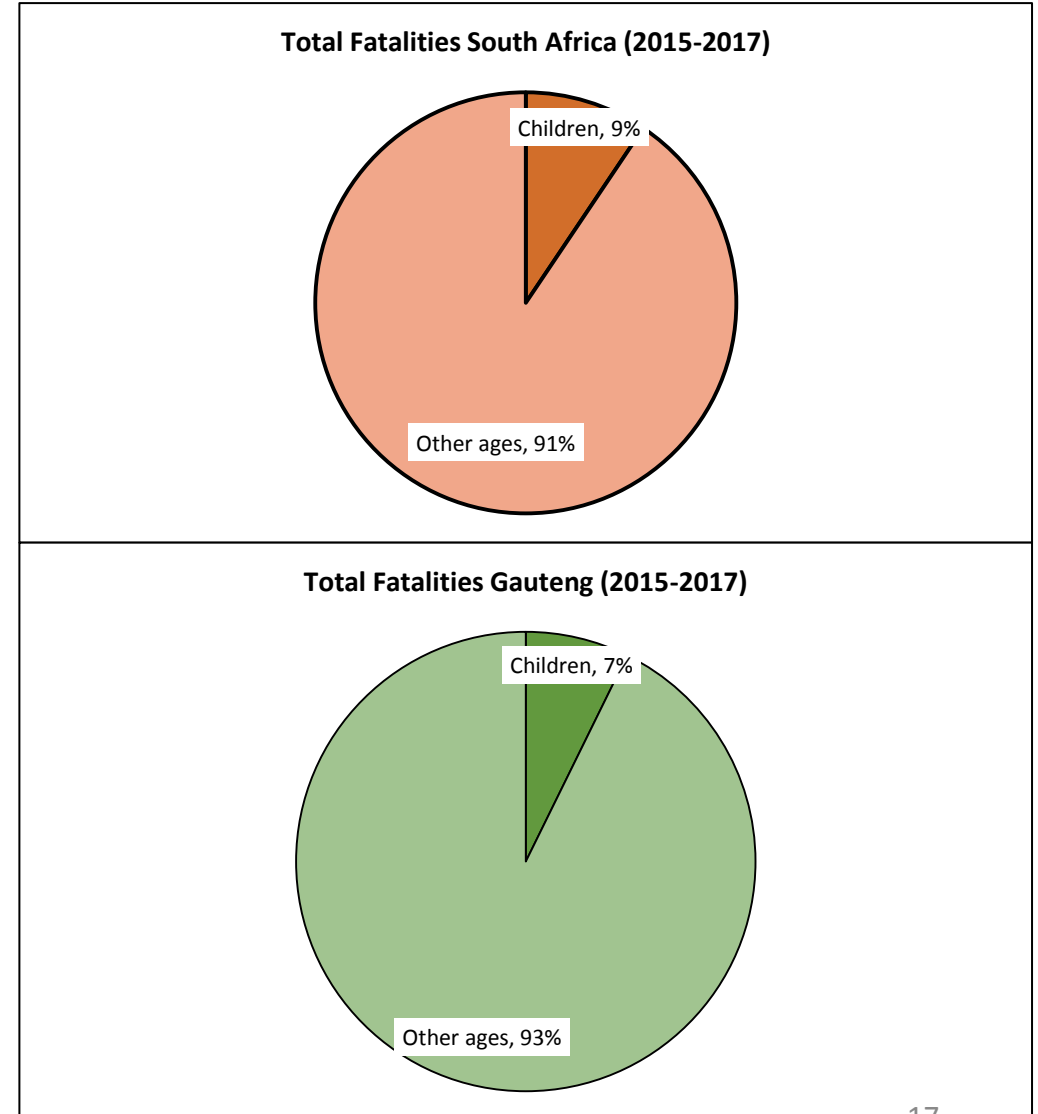
Time taken to access education

- Majority take longer than 15 minutes (67%)



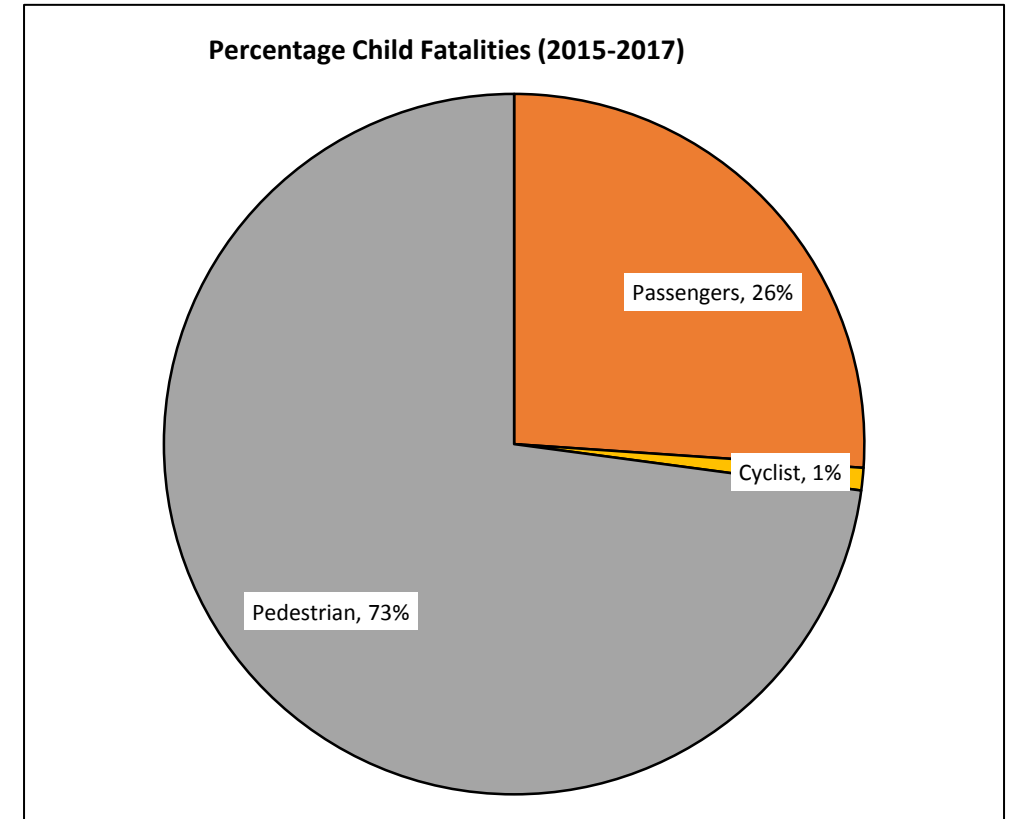
Preliminary Findings

- Children constitute 9% of road fatalities in South Africa and 7% of road fatalities in Gauteng



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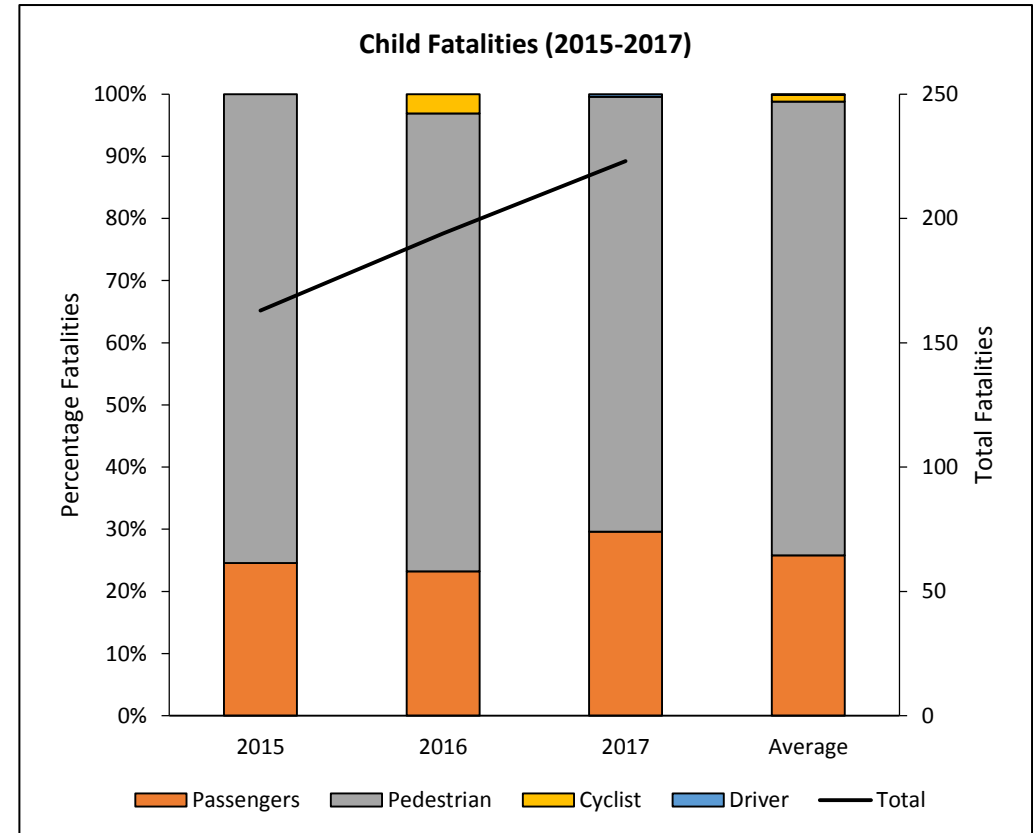
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Source: RTMC, 2015-2017

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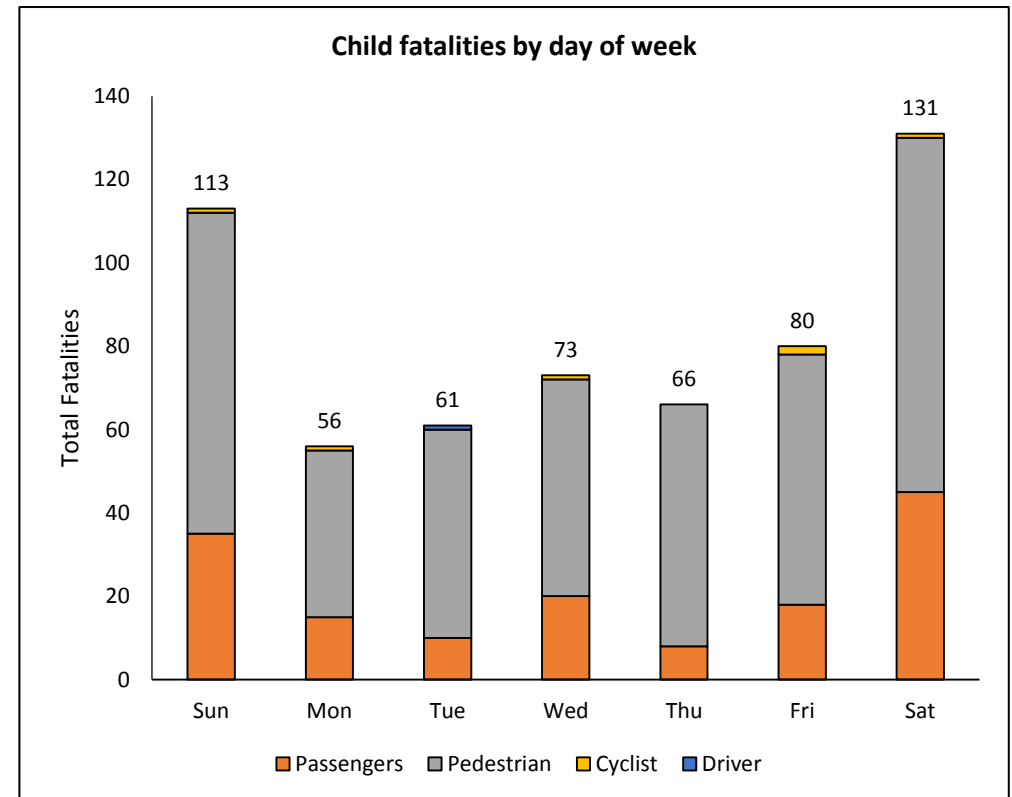
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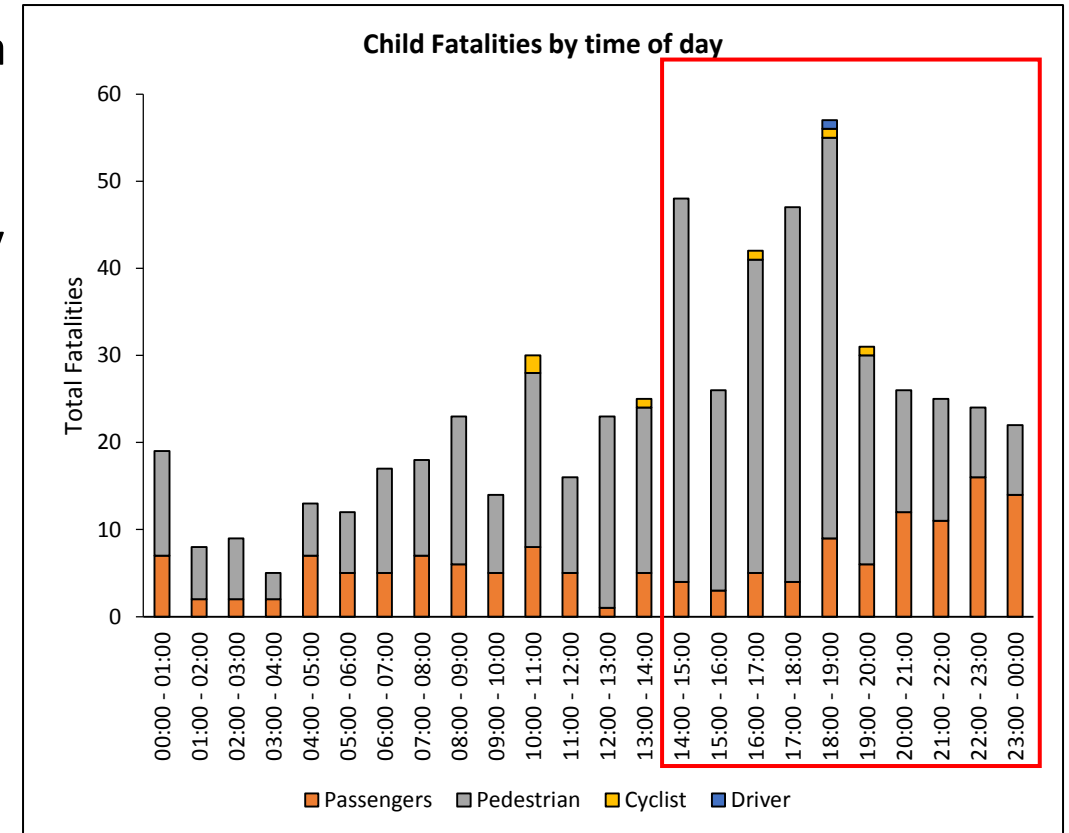
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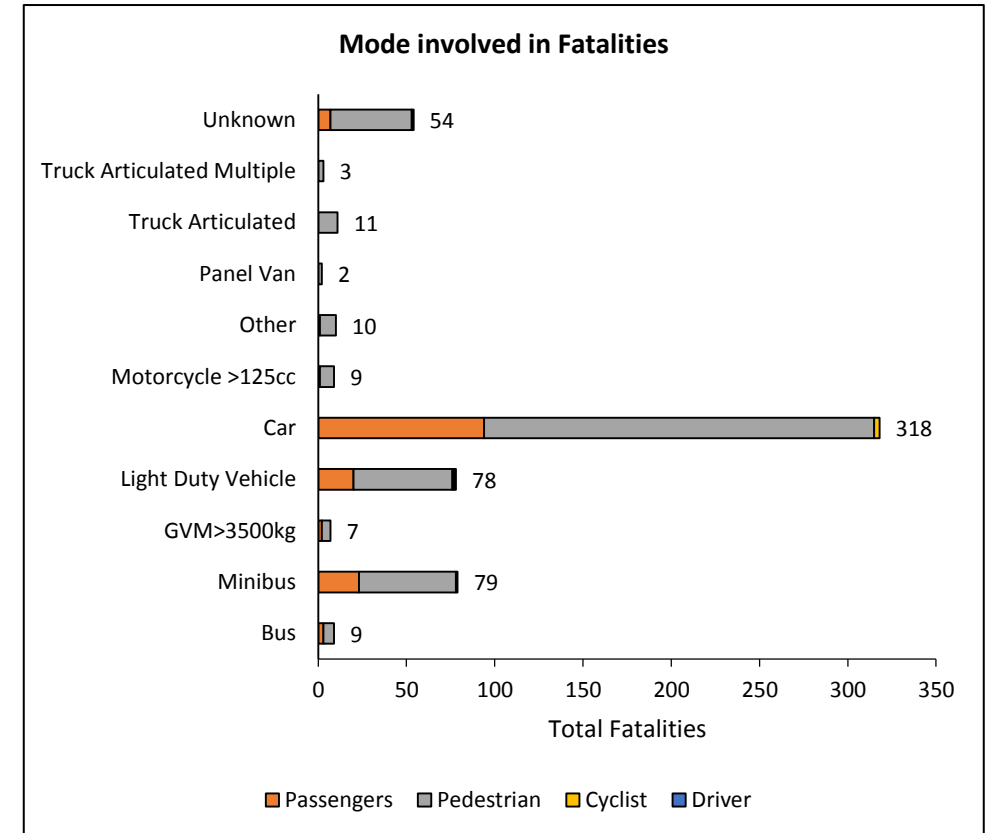
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- Majority of child fatalities occur during the weekend
- ‘After-school’ activities place children at a greater risk
- Cars, Minibus taxis (VKTs?) and Light duty vehicles placing road users at risk



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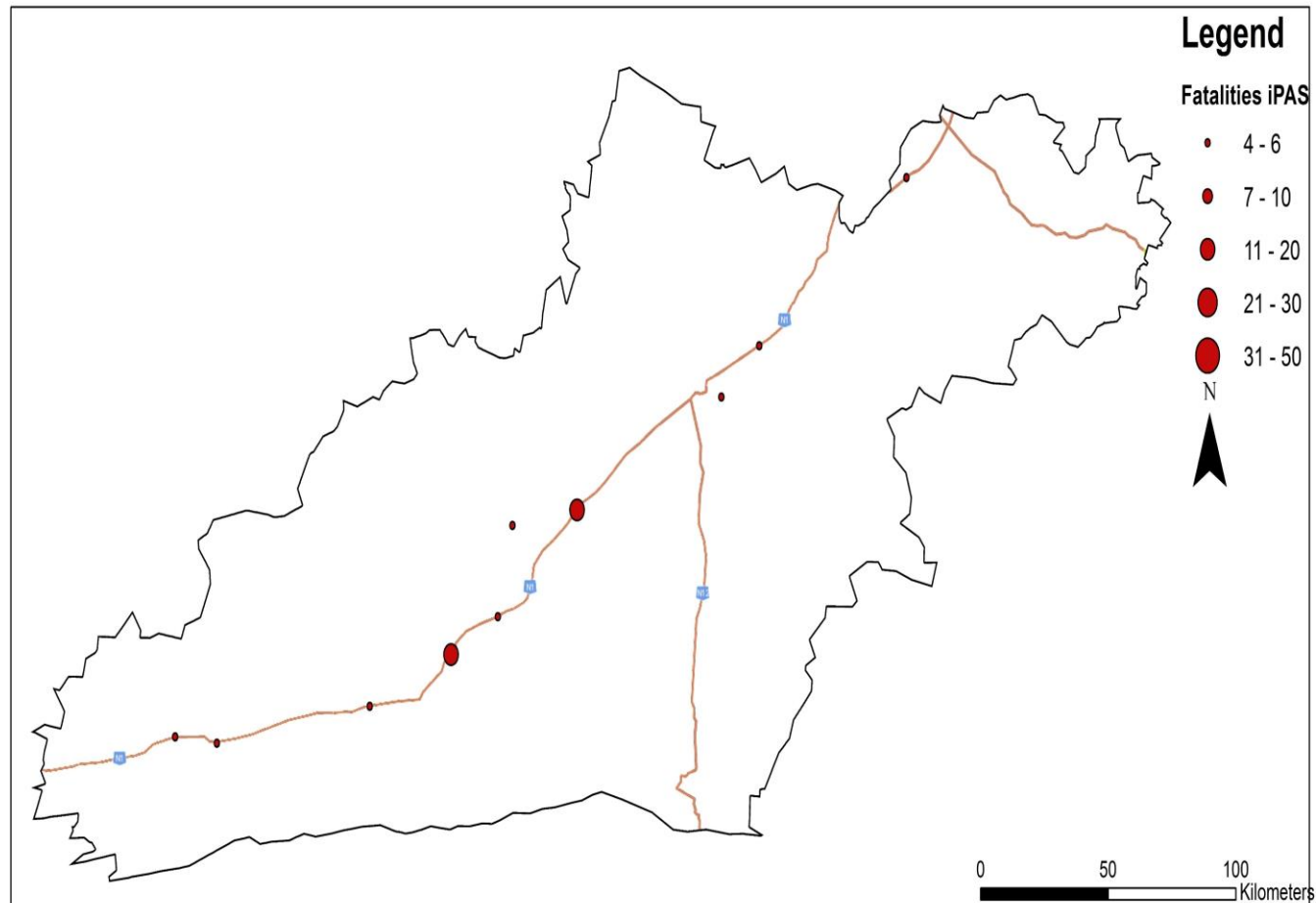
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- Interventions around education and enforcement need to focus on car and minibus taxi drivers in order to curb violation of traffic laws
- Better data is required that includes reporting on road injuries and that provides geocoded locations of injuries
 - Serious injuries can disable children. Most child cyclist injuries are unreported
 - Geocoded data can provide us information as to locations that are dangerous for children. Are these locations closer to home or to school?

Implications

- Example of geocoded data analysis – WC Central Karoo

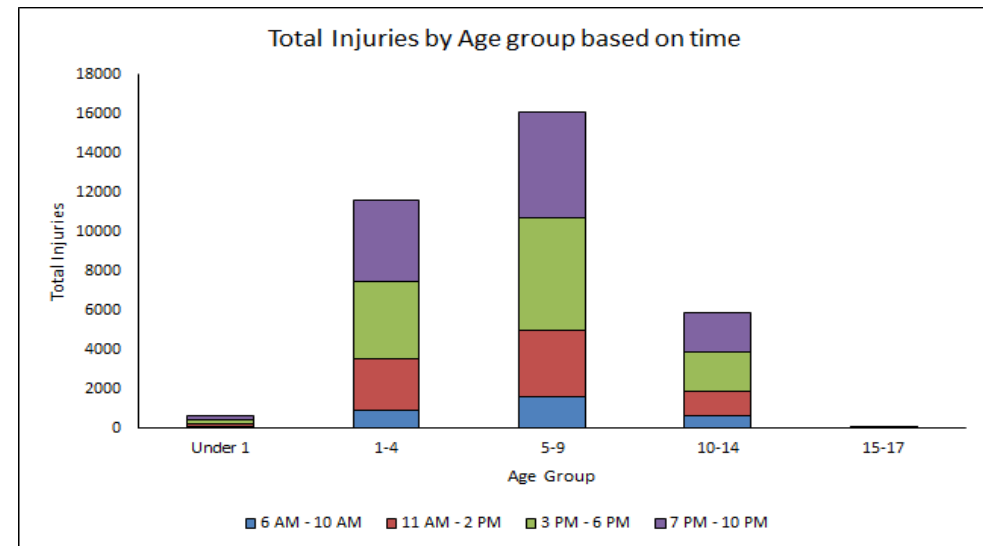


Data Source: iPAS, 2011-2015

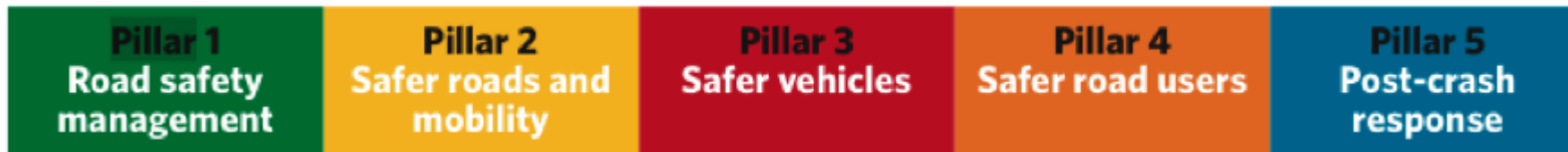
Way Forward

- Road Safety Interventions
 - 1) Low Road Safety budget, therefore, we need to prioritise
 - 2) Prioritise child pedestrian and passenger children
 - 3) How? Determine cause of these injuries and recommend localised interventions based on the five pillars of road safety – ‘Lollipop measure’
- Data required yet
 - 1) Mortuary data that provides cause of road fatalities – gap in deaths caused by alcohol
 - 2) National geocoded data or geocoded data for Gauteng
 - 3) Data that divides child injuries by age group

Name of Scenario:	Costs (R million)		Lives saved/20 years		Overall BC Ratio/20 years		Break-Even (fatalities only)	
	Capital/20 year	Operational/year	Conservative	Optimistic	Conservative	Optimistic	Conservative	Optimistic
Infrastructure based scenarios								
Prince Alfred Hamlet	9	0.0868	16.0	79.1	11.3	56.0	60 (67)	2 (29)
Khayelitsha	9	0.0868	58.4	288.9	41.3	383.2	44 (49)	28 (29)
Rumble strips in Grabouw	0.784	0.014	286.8	371.8	2113	2738	3 (4)	3 (3)
Lighting at the intersection in Rawsonville	0.135	0.001	4	16	202.9	811.5	26 (31)	13 (16)
Enforcement based scenarios								
Speed over distance in Leeu Gamka	2.1	1.0	59.13	80.41	21.0	28.5	15 (17)	14 (16)
Education based scenarios								
Campaigns	0	45.2	1238.4		15.1		19 (21)	
Emergency Medical Services based scenarios								
Improved ambulance services	1.8	0.495	200	300	67	101	1 (1)	1 (1)
Improved motorcycle services	0.6	0.145	200	280	224	314	1 (1)	1 (1)
Improved helicopter services	0	18.0	215	7648	4.7	166	1 (1)	1 (1)
All costings are based on base year values. No inflation on costs or benefits have been included								



Data Source: Red Cross War Memorial Hospital, 1991-2016



'Lollipop' Intervention



Source: Amend and FIA, 2016

Quick video

