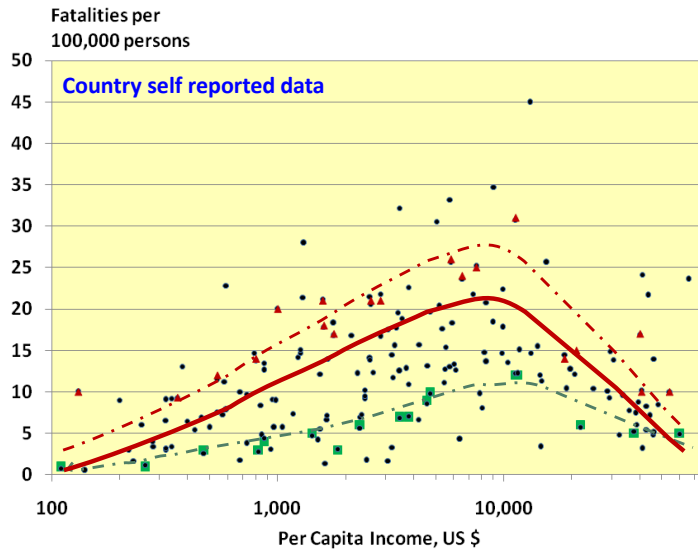


New Issues in Vehicle Safety with Special Reference to Locations with High Pedestrian, Bicycle, Motorcycle and Para-transit Vehicle Use

Dinesh Mohan
Shiv Nadar University
dineshmohan@outlook.com

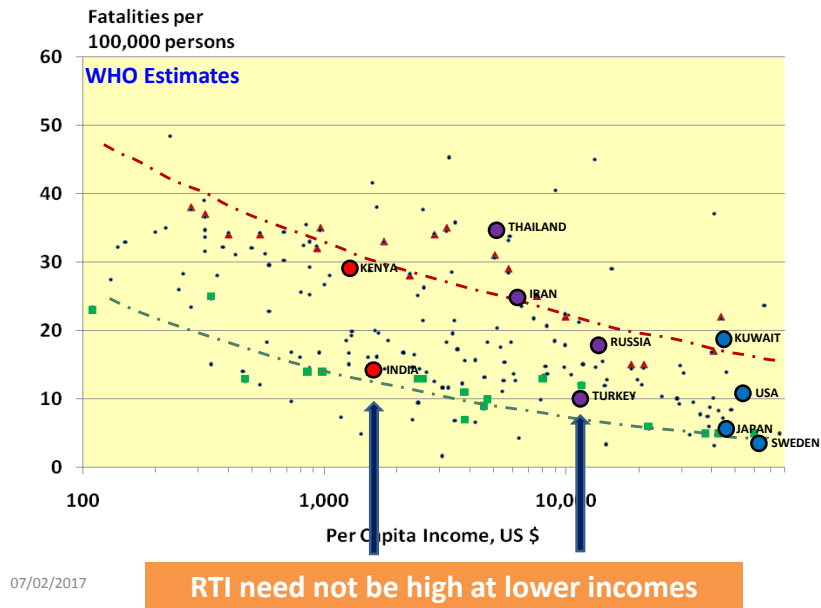
TRB 96th Annual Meeting (January 8-12, 2017)

Road Traffic Fatalities and National Income Traditional Understanding



Global Status Report On Road Safety: Time For Action (2009)
07/02/2017

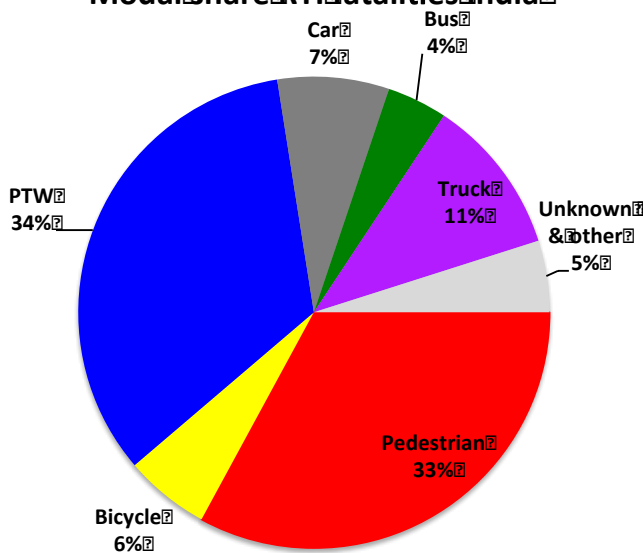
Road Traffic Fatalities and National Income New Understanding (?)



POLICIES OF INTERNATIONAL DONOR AGENCIES

- SPREADING “AWARENESS” AND “EDUCATION”
- ENACTING STRICTER REGULATION AND ENHANCING PENALTIES
- IRAP GUIDELINES FOR ROAD DESIGN
- SPEED CONTROL BY ENFORCEMENT
- CONTROL OF DRINKING AND DRIVING BY ENFORCEMENT
- HELMET USE BY MOTORCYCLISTS BY EDUCATION AND ENFORCEMENT
- NCAP FOR CARS

Modal Share RTI fatalities India

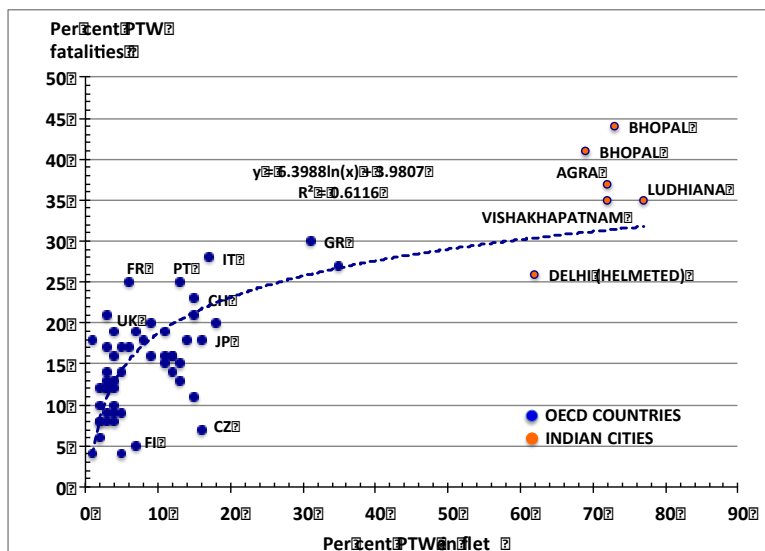


IF ALL CARS SATISFIED BEST NCAP NORMS TOMORROW WE SAVE ~ 4% LIVES

07/02/2017

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Percent Powered Two-Wheelers in fleet vs Percent PTW fatalities

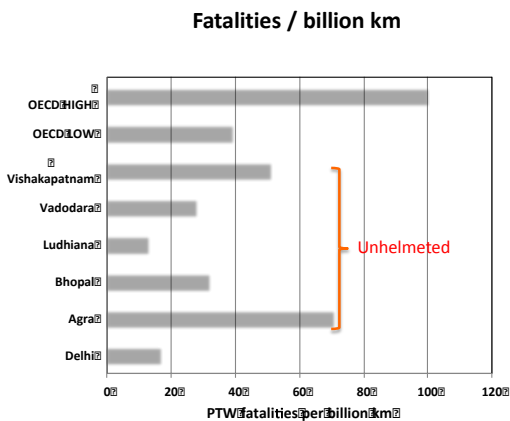


07/02/2017

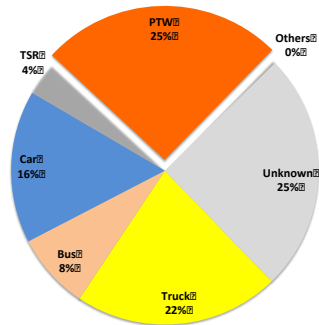
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Powered two-wheeler issues, Indian cities and OECD



Pedestrian fatalities and striking vehicle



PTW/CAR RISK RATIO
 Indian cities: ~ 5
 OECD countries: 13-30

Bhopal, India

Daytime Running Lights, ABS/Combined Braking, Helmets, Vehicle Design, Speed Governors

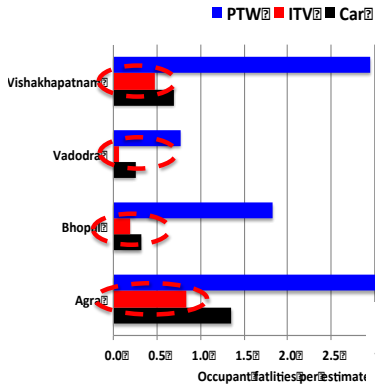
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- ITVs do not conform to any crashworthiness standards
- ITV small engines do not permit $V > 50\text{km/h}$
- Possible they slow down vehicles around them
- Fatality rates much lower than expected

- Possible Lessons**
- NCAP should not be applied to ITV
 - Special standards for ITV needed
 - Small vehicles ($V_{\text{max}} < 50\text{km/h}$) for urban areas
 - Special NCAP for these vehicles

