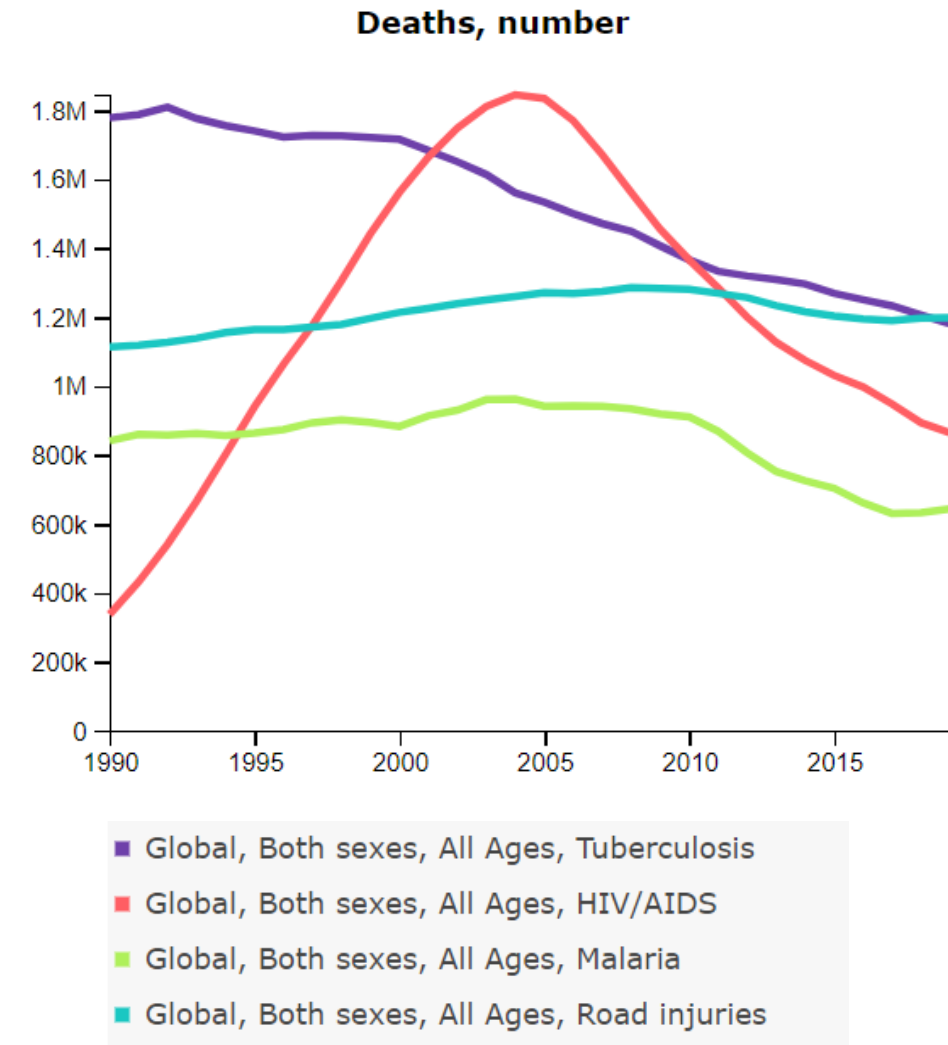# PRESENTATION CONTENTS

- A quick recap on the global road safety problem

- The importance of investing in effective road safety interventions

- Addressing road safety through a Safe System approach

- Specific interventions by Safe System pillars

GLOBAL ROAD SAFETY

- 1.35m deaths each and every year

- Up to 50m injuries, many life altering

- 8th leading cause of death worldwide, and leading cause of death for those aged 5-29 years

- 93% of deaths in LMICs

- Economic impact 2-6% of GNP

Deaths, number

- Global, Both sexes, All Ages, Tuberculosis
- Global, Both sexes, All Ages, HIV/AIDS
- Global, Both sexes, All Ages, Malaria
- Global, Both sexes, All Ages, Road injuries

KEY CRASH TYPES – FATAL/SERIOUS

- Pedestrians – walking along the road and crossing

- Motorcyclists and cyclists

- Run-off-road

- Intersection

- Head-on

- Rear-end

A new guide on road safety interventions

www.roadsafetyfacility.org

WHY THIS GUIDE?

- Limited budgets – need to invest in interventions that will produce the biggest reductions in fatal and serious injury

- Extensive body of evidence on what works, but this is often not accessed

- 'Common sense' often used – unfortunately, this is often wrong

- Bring together the evidence on effective interventions to improve road safety, but also to warn about interventions that are not as effective as we might expect

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THE SAFE SYSTEM APPROACH

Safe road infrastructure

Safe Speeds

Safe road users

Safe vehicle

Effective post-crash care

All within an effective road safety management approach

- People make mistakes

- Death and serious injury are not acceptable

- Road users are vulnerable

- Responsibility is shared

INTERVENTION	DESCRIPTION	POTENTIAL EFFECTIVENESS
TRAFFIC CALMING INCLUDING HUMPS, CHICANES	Reducing speed of traffic, especially in areas of higher risk (that is, presence of vulnerable road users; poor quality infrastructure; entering a built up area on a rural road)	HIGHLY EFFECTIVE
ROUNDABOUTS	Intersection control measure implemented in order to reduce speeds, angle of impact, and road user conflict points	HIGHLY EFFECTIVE
RAISED INTERSECTIONS	Raised section of roadway on approach and/or through an intersection	HIGHLY EFFECTIVE
RAISED CROSSINGS	Raised section of roadway at a pedestrian crossing point	HIGHLY EFFECTIVE
GATEWAY TREATMENTS	Signs used with other measures (including physical or painted lane narrowing) to create a threshold or gateway between high and low speed environments	HIGHLY EFFECTIVE
LOWER SPEED LIMITS	Mandatory maximum speed limits for vehicles, most effective when these are set to provide safe mobility for all road users and supported with appropriate infrastructure design	HIGHLY EFFECTIVE
30 KM/H (20 MPH) ZONES FOR PEDESTRIANS	Road environments designed to reduce speeds to 30 km/h (20 mph) or below.	HIGHLY EFFECTIVE
SPEED CAMERAS	Mobile or fixed cameras that can detect vehicle speeds at a set point, or over a length of road	HIGHLY EFFECTIVE
INCREASING TRAVEL SPEED WITHOUT IMPROVING QUALITY OF INFRASTRUCTURE	Increasing speed of traffic without appropriate improvements in infrastructure[24]	NOT EFFECTIVE: CAN RESULT IN INCREASED RISK

A.2.2 TRAFFIC CALMING INCLUDING HUMPS, CHICANES

Various road infrastructure devices can be used to effectively manage the speed of vehicles. Humps (Figure A.15) and platforms refer to raised sections of pavement, with various forms of speed humps and platforms available for different road types and speed environments. Chicanes provide another mechanism for slowing vehicles through horizontal deflection (or movement) of vehicles. Again, the designs can vary depending on the degree of speed control desired, as well as the operating environment. These interventions can be used at high risk locations (such as areas where pedestrians and other vulnerable road users need to cross) or as part of an integrated area-wide traffic calming scheme.

Figure A.15: Traffic calming/Speed Hump (Source: NACTO)

Well-designed traffic calming can produce substantial safety benefits. Reductions of around 35 percent for all injury crashes are typical, but much higher benefits are likely for pedestrians and other vulnerable road users (around a 70 percent reduction in fatal and serious pedestrian injury).[49] [50] [55] [72]

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SELECTING ROAD SAFETY INTERVENTIONS

- **Fatal and serious injury reduction potential**

- **Economic Efficiency and Affordability:** Cost

- **Compatibility:** Broader health impacts and impact on Environment and Traffic / other road users

- **Acceptability:** Public acceptance / understanding

- **Technical Feasibility** and Experience installing and maintaining, etc.

- **Legal Conformity**

- **Political And Institutional Acceptability :** Is the intervention likely to attract political support?

ROAD SAFETY MANAGEMENT

- Adopting a **Safe System approach**

- Undertaking a **road safety management capacity review**

- Strong leadership through a '**lead agency**'

- A **road safety management framework** with Key Performance Indicators (KPIs), **data collection strategies** to plan and monitor road safety activity and outcomes

- **Building road safety capacity** across the sector

- Ambitious **strategies** and road safety targets with regular reporting on progress.
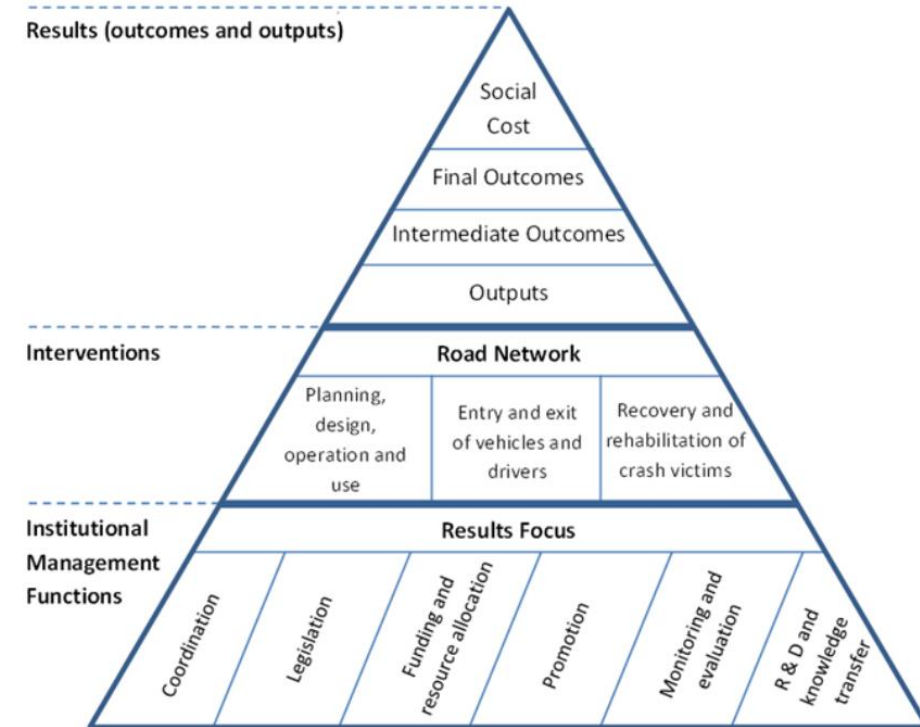
Road Safety Management System

Source: Bliss and Breen (2012)

SAFE ROADS AND ROADSIDES

Integrated public transport

- Moving road users on to safer forms of transport

- Well designed public transit: Bus Rapid Transit (BRT)

- Without adequate road infrastructure, e.g safe crossing benefits will be greatly reduced.

- Evidence of more than 50% reduction in fatalities in TransMilenio BRT in Bogotá; a 46% reduction in crashes in Macrobús, Guadalajara; and a 55% reduction in fatalities from the Janmarg BRT in Ahmedabad.

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SAFE ROADS AND ROADSIDES

Footpaths and crossings

SAFE ROADS

Crash barrier systems

WHAT DOES NOT WORK – SAFE ROADS

With Paving and Resurfacing Speeds increase

SAFE SPEEDS

Setting right speed limits and signs to convey

School zones

Traffic calming

Roundabouts

SAFE SPEEDS

Gateway treatments

SAFE ROAD USERS

Speed enforcement

In-vehicle monitoring systems – bus and fleet vehicles

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SAFE ROAD USERS

Drink drive enforcement

SAFE ROAD USERS

Seat belts

Graduated driver license system

Helmet wearing

WHAT DOES NOT WORK – SAFE ROAD USERS

- School-based <u>skills</u> training

- Post-license driver and rider training (improve licensing system instead)

- Most school-based education programs – concentrate on safety provisions on roads around schools instead

- Public education campaigns on their own <u>(must link to enforcement and penalties)</u>

SAFE VEHICLES

- Improved vehicle specifications

- Vehicle maintenance

- Seat belts (front and rear)

- Daytime running lights

- New vehicle technologies
  ❖Electronic stability control
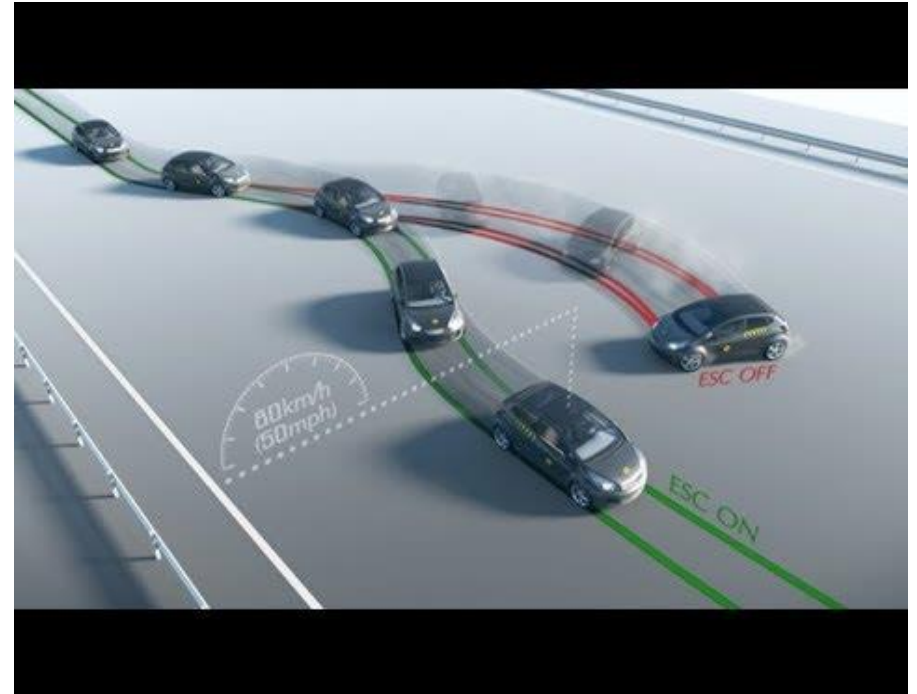
EFFECTIVE POST-CRASH CARE

- Improved response times

- Improved care from first responders

- Improved hospital facilities

OUR ROAD SAFETY 'SUPERSTARS'*

*30%+ improvement

Roads and roadsides	Speeds	Road users	Vehicles
Integrated public transport	Traffic calming	Increased helmet wearing rates	Seat belts
Barrier systems	Roundabouts	Increased seat belt wearing rates	Electronic Stability control
Medians	Raised intersections		Advanced vehicle technologies
Infrastructure solutions to support appropriate speeds	Raised crossings		
Roundabouts	Gateway treatments		
Grade separation	Lower speed limits		
Reducing risk exposure at intersections	30 km/h (20 mph) zones for pedestrians		
Pedestrian footpaths	Speed cameras		
Pedestrian crossings			

SUMMARY

➢ New guide on effective road safety interventions

➢ Some things don't work - don't make the situation worse!

➢ Use the evidence base – not 'common sense'

➢ Some interventions of very high benefit and at moderate cost

➢ A Safe System response is needed across multiple pillars