



Transportation and public health team up to bring a powerful solution to a sticky, wicked problem

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The Task Force for Global Health

January 13, 2016

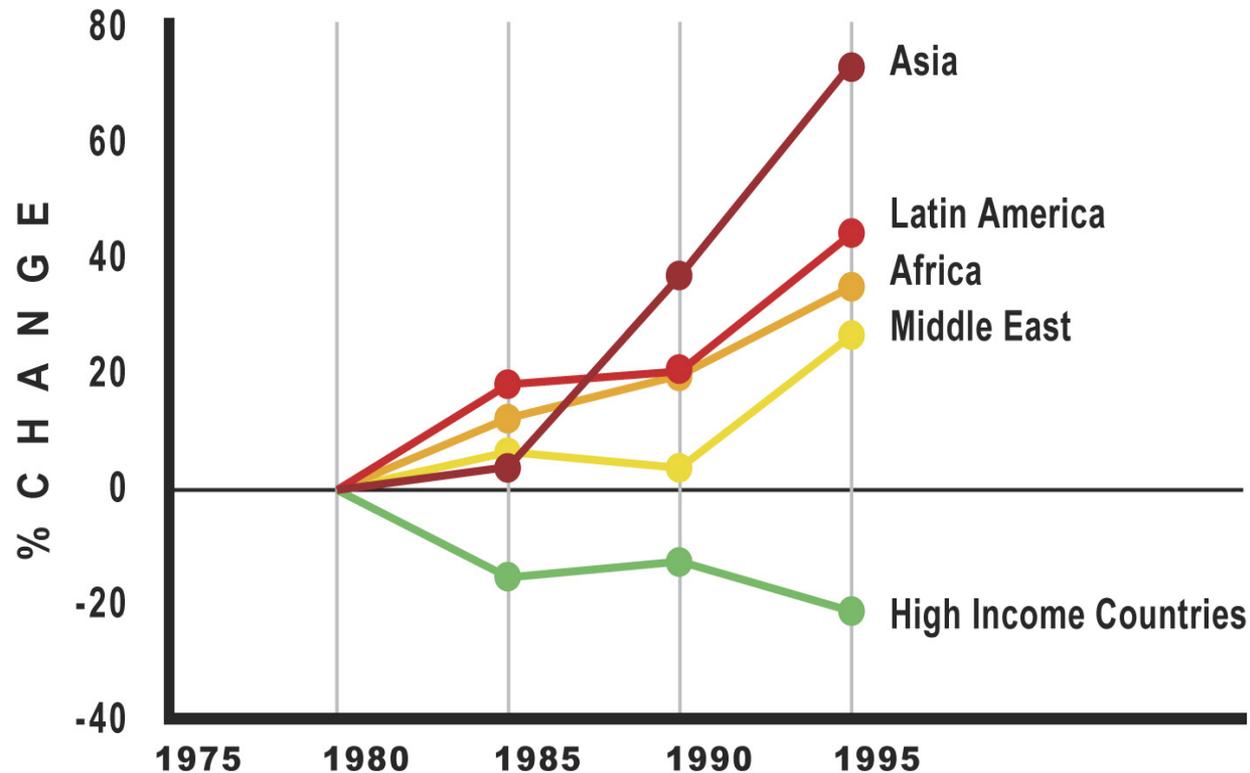


Transportation and public health can bring a powerful solution to a sticky, wicked problem

- We have a global road safety crisis. Transportation safety is a global problem and we need public health and transportation to team up to address this problem on a global scale.
- Public health brings both
 - an approach
 - Based on science
 - Focused on prevention
 - Collaborative at its core
 - a set of issues
 - Safety (vehicle, roadway, driver/road user)
 - Pollution
 - The built environment/auto independence
 - Economic development and access
 - Transportation in public health emergencies and natural disasters
 - Transportation of dangerous goods
- We usually think about exporting U.S. practices to low- and middle-income countries. We also have much to learn from them.

Road Traffic Injuries are exploding in developing countries

- Road Traffic Injuries (RTIs) take approximately 1.3 million lives per year and seriously injure 20-50 million people each year. Rates are accelerating rapidly in developing countries, and are expected to rise 87% by 2020.

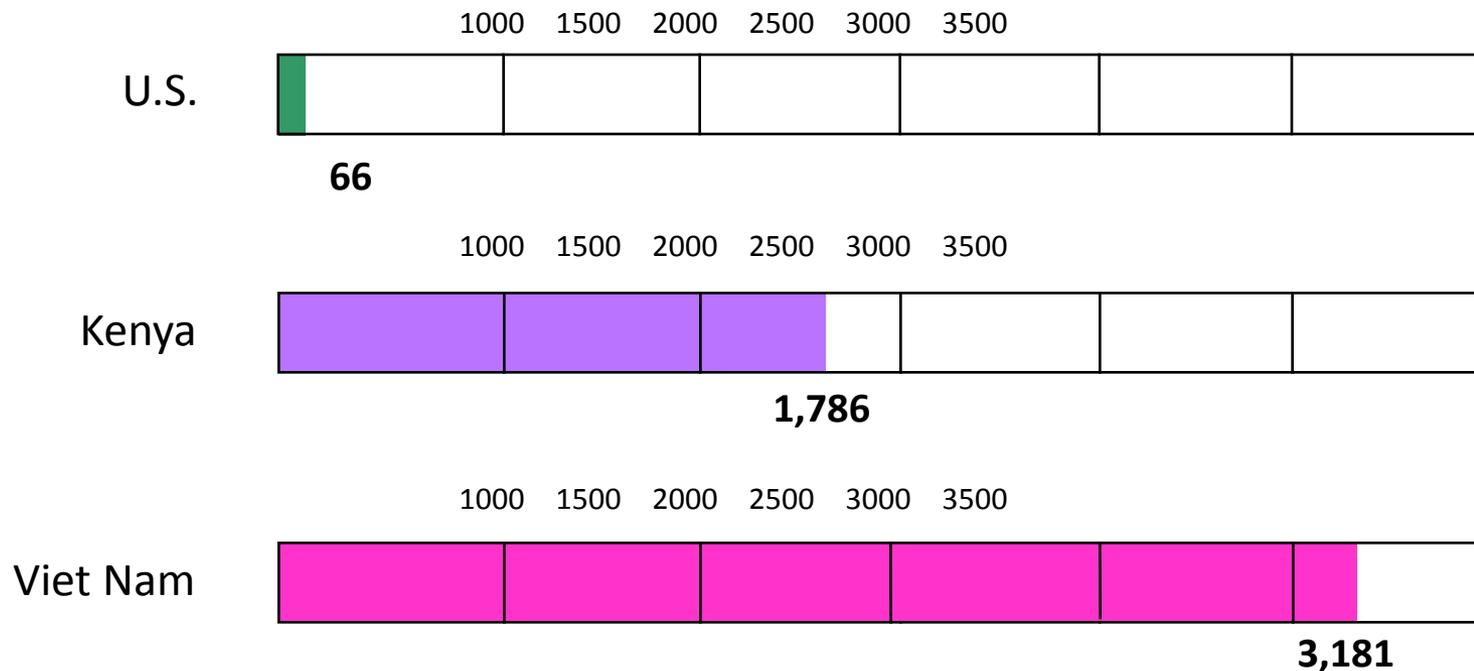


Source: *World Health Report 2004*.

Chart reproduced from Jacobs G, Aeron-Thomas A, Astrop A. Estimating global road fatalities. Crowthorne, Transport Research Laboratory, 2000 (TRL Report 445).

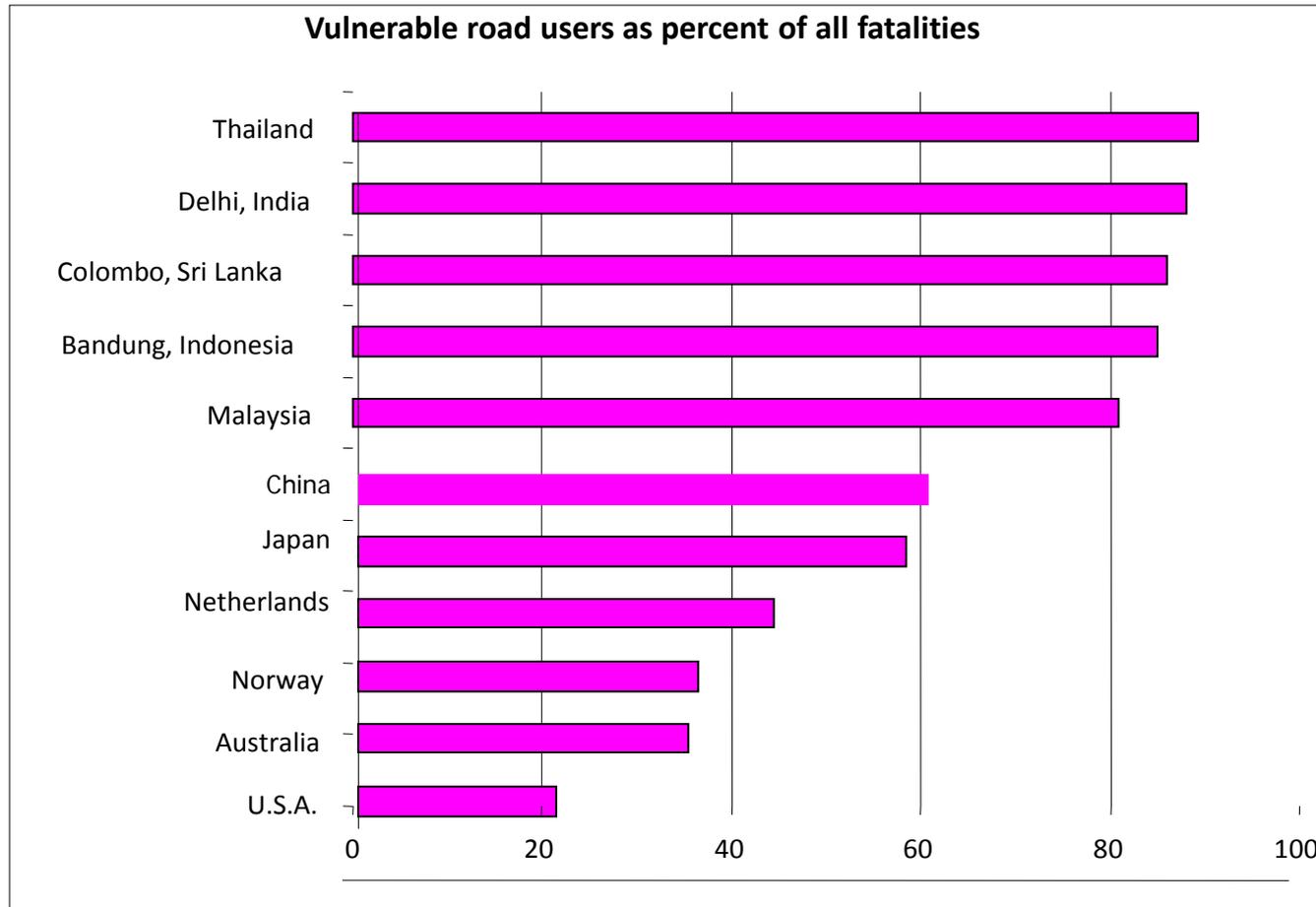
Fatality rates are markedly higher in developing countries

Fatalities per 10,000 Crashes



Source: Reich MR, Nantulya V. Road Traffic Injuries in Developing Countries: Strategies for Prevention and Control. Presented at the Road Traffic Injuries and Health Equity Conference, Harvard University, Cambridge, MA, April 10-12, 2002.

Vulnerable road users constitute a larger proportion of fatalities in developing countries



Source: Adapted from *The World Report on Road Traffic Injury Prevention*; “Vulnerable road users” are combined totals for pedestrians, bicyclists, and motorcyclists. China data from Jonathon Passmore, average figures for 1995-2002.

Traffic Injuries are an Enormous Global Health Problem

- 1.3 million killed
- Leading killer children over age 5
- 90% deaths and injuries occur in the poorest countries

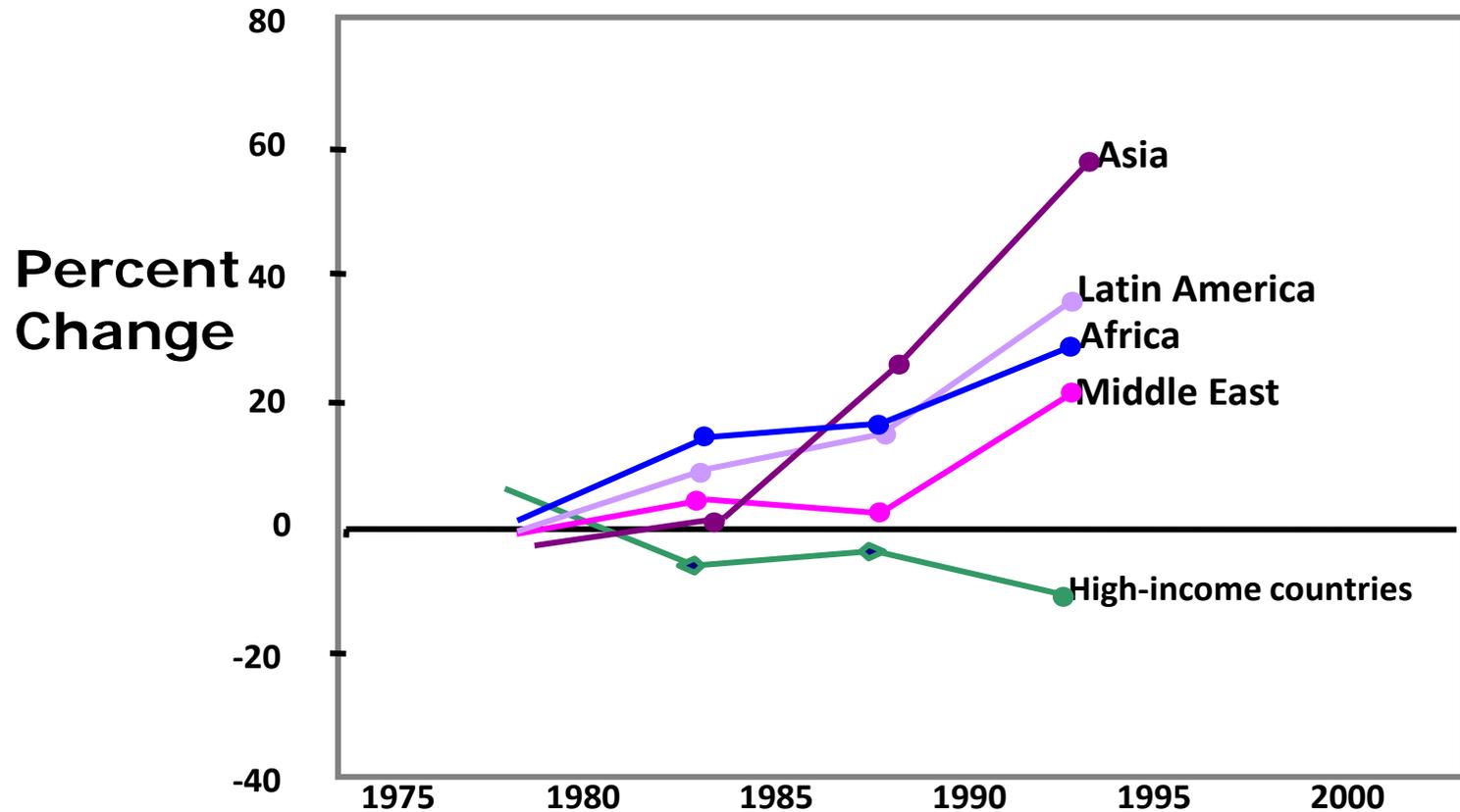


WHO , 2008

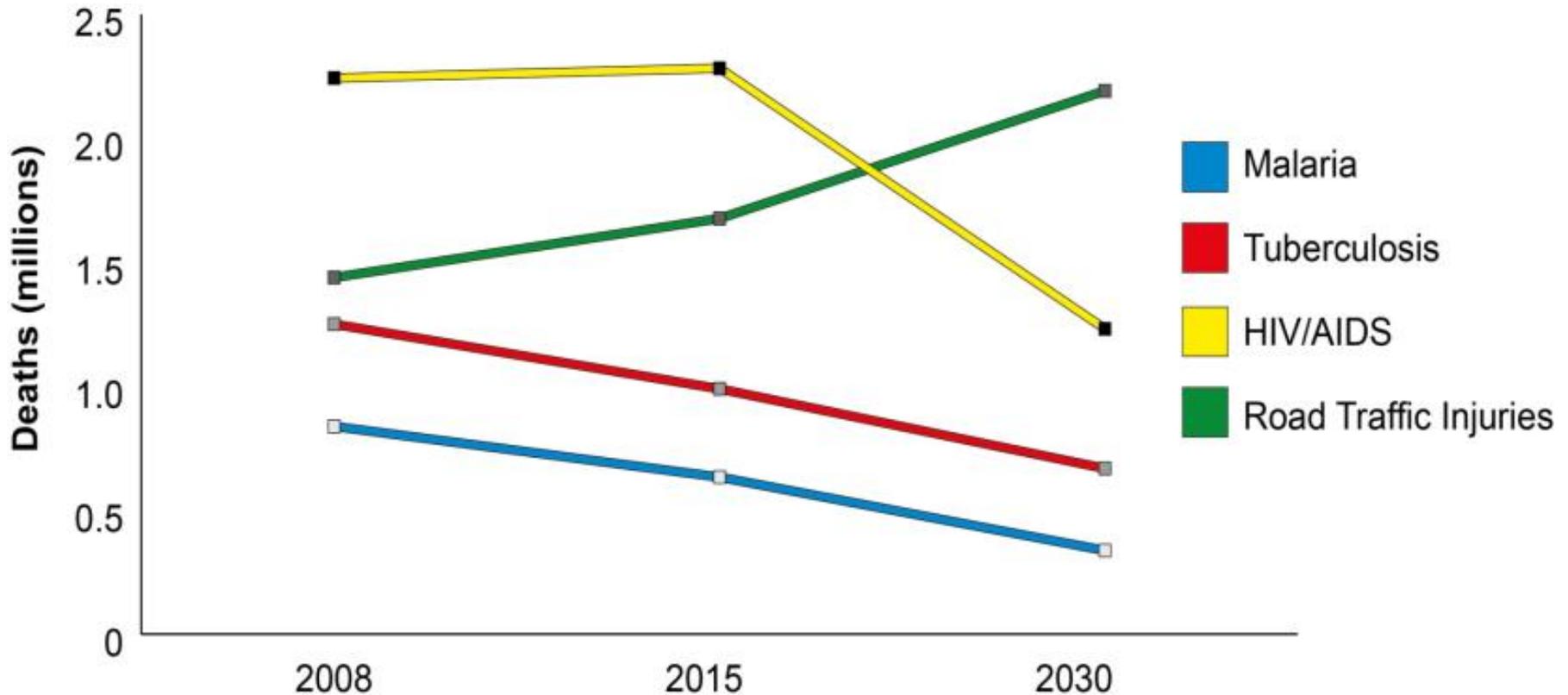
Road Traffic Injuries are the Perfect Plague

- Adding more and more vehicles to an inadequate infrastructure with new drivers and inadequate enforcement leaves vulnerable road users to suffer the consequences.
- We are manufacturing the “Perfect Plague.”
- We have a fine approach to getting rid of accidents.

Global Change in Traffic Fatalities per 100,000 pop



While global mortality from AIDS, TB and Malaria are decreasing, RTIs go up



Source: WHO Global Burden of Disease 2008

Leading causes of death

Ages 15-29

GBD 2010

	LEADING CAUSE	%
1	Road traffic crashes	10.7%
2	HIV/AIDS	9.5%
3	Tuberculosis	7.5%
4	Self-inflicted injuries	7.5%
5	Violence	7.1%

GBD 2013

	LEADING CAUSE	%
1	Road traffic crashes	11.8%
2	Self-inflicted injuries	8.5%
3	HIV/AIDS	8.0%
4	Cardiovascular diseases	7.1%
5	Violence	7.0%

NOUF KHAMIS
SAHEH





Scale of problem (DALY rankings)

Disease or injury	2002	2030	Optimistic 2030	Male 2030
Perinatal conditions	1	5	7	5
Lower respiratory conditions	2	9		9
HIV/AIDS	3	1	1	1
Unipolar depressive disorders	4	2	2	6
Diarrhoeal diseases	5	13		
Ischaemic heart disease	6	3	3	3
Cerebrovascular disease	7	6	5	7
Road traffic crashes	8	7	4	2
Malaria	9	15		
Tuberculosis	10	10		8

[Source: Updated projections of global mortality and burden of disease, 2002 – 2030: data sources, methods, and results, WHO, October 2005](#)

RTIs are an enormous barrier to development

Direct cost of road crashes **\$518B**

On average 1-1.5% of developing nations' annual GDP.

For developing nations **\$65B**

More than double the amount of annual development assistance the region receives.

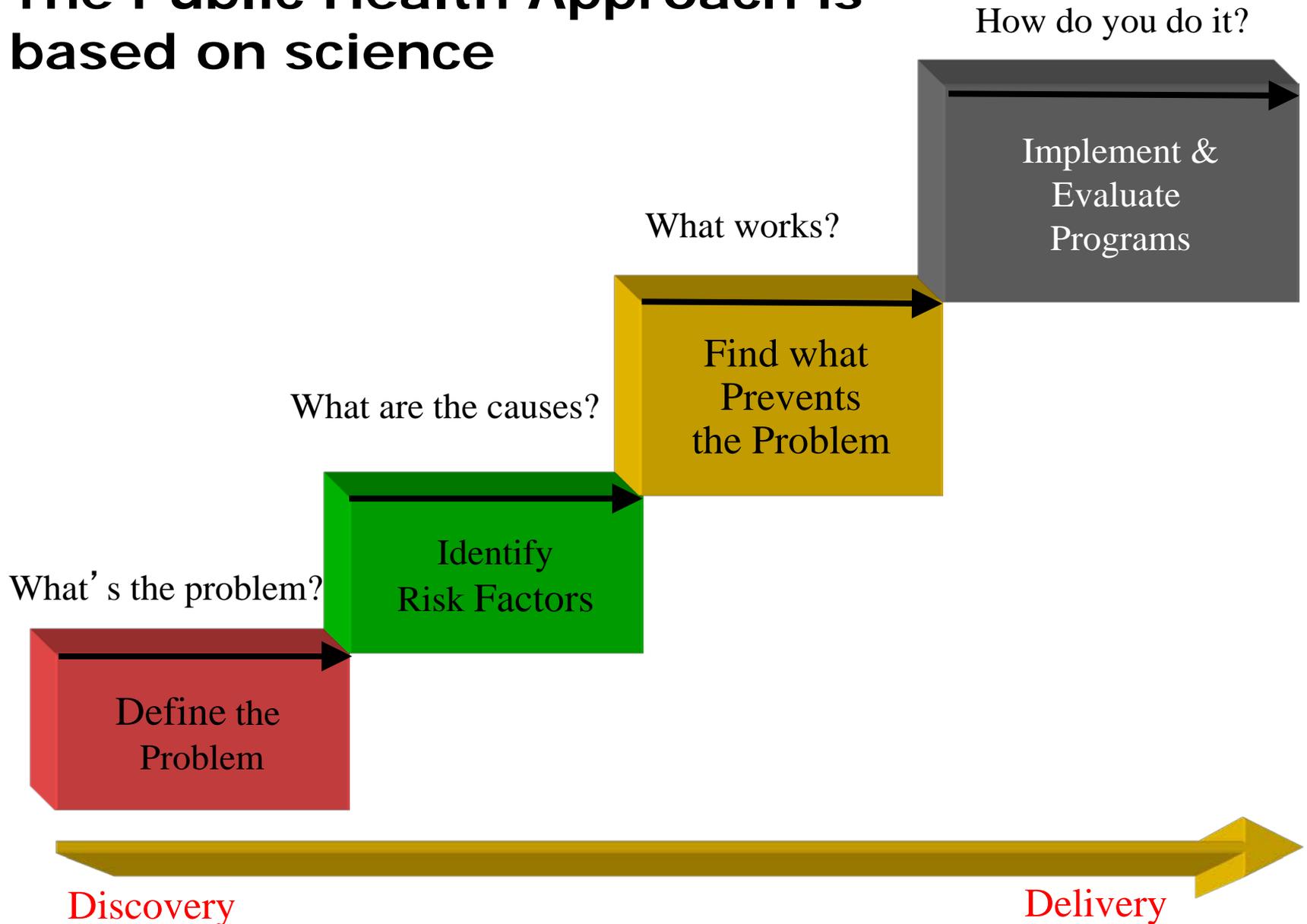
Crashes push families into poverty

RTI victims are often household wage earners, leaving dependents without critical sources of financial support.

Public health brings both an approach and a set of issues

- **an approach**
 - Based on science
 - Focused on prevention
 - Collaborative at its core
- **a set of issues**
 - Safety (vehicle, roadway, driver/road user)
 - Pollution
 - The built environment/auto independence
 - Economic development and access
 - Transportation in public health emergencies and natural disasters
 - Transportation of dangerous goods
 - Violence (using planes or vehicles, road rage, on public transport)

The Public Health Approach is based on science



The public health approach is focused on prevention

- **MOTORCYCLE HELMETS**
- **SEAT-BELTS**
- **DRINKING AND DRIVING PREVENTION**
- **SPEED REDUCTION MEASURES**
- **INFRASTRUCTURE**
- **SUSTAINABLE URBAN TRANSPORT**
- **VEHICLE STANDARDS**

- BLOOMBERG PHILANTHROPIES FOCUS ON THESE SEVEN PROVEN INTERVENTIONS

The Public health approach is collaborative at its core...but collaboration is never easy.



Everybody Thinks They are an Expert in Collaboration

**“In theory,
theory and
practice are the
same; in practice,
they are not.”**

— Yogi Berra

- An evaluation of coalitions formed in the early days of the Bill & Melinda Gates Foundation showed that almost all of them failed to reach their potential.

So Why Do We Need Help with Collaboration?

- The science is easy
- People are hard
- Institutions are impossible

Initial Barriers: Seven Cs

- Culture
- Conflicting Goals
- Confusion
- Control
- Capabilities
- Competition
- Costs (no one wants to pay for collaboration)

A Coalition is Like a Marriage: It's Very Easy to Get Into It, But Very Hard to Make It Work

- **Strong partnerships begin with a recognition of each other's infallibilities.**
 - We are human and fully capable of messing up.
- **There will always be demands and disappointments in love and partnerships.**
 - “Love is something you give but you don't have; and you give it to someone who doesn't want it.”--Lacan
- **Best marriages are honest, real, and complementary.**
 - They give you the best chance of overcoming hurdles...but they mean you will argue more.

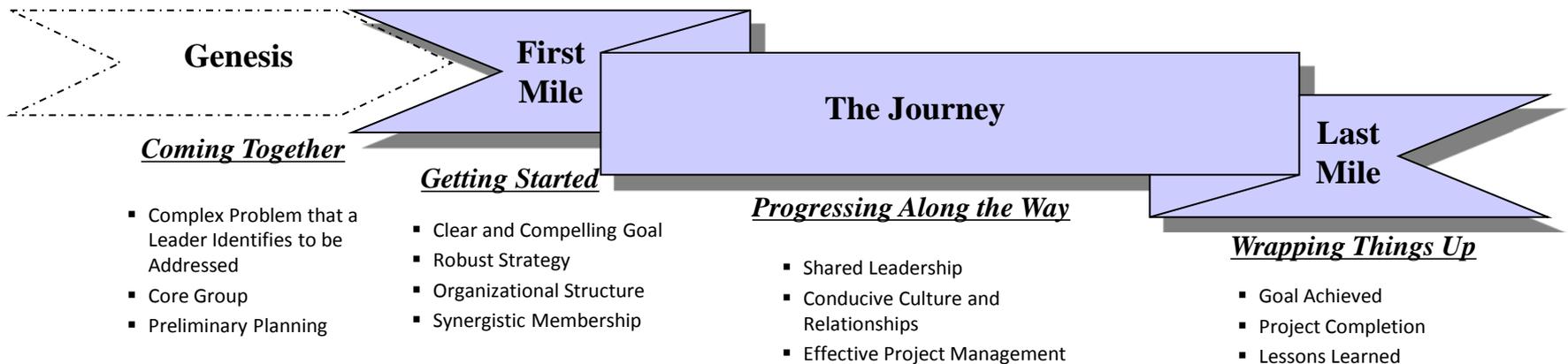
**Quote by Jacques Marie Émile Lacan (French psychoanalyst 1901-1981)*

Multi-sectoral Collaboration is Not Easy

- There are obstacles for every collaboration
 - Stakeholders speak different languages, have different cultures and every organization has its standard operating procedures
 - There is competition for credit, power, and funding.
 - Obstacles (and opportunities) occur at every level: global, multinational agencies, regions, countries, communities.
- Each sector thinks it is not their responsibility.
 - Diffusion of agency responsibility—Inter-sectoral challenges can be particularly difficult
 - Stakeholders all have different “day jobs”
 - Each is already too busy with its own set of crises
- Road Safety is an underfunded area
 - No one is eager to control it or be responsible or accountable.
 - Inter-operability does not happen by chance—it must be produced.

Framework for Creating Successful Collaborations

Our framework, derived from the common elements of successful collaborations, provides a pathway for meeting challenging goals.



Collaborative partnerships have the best chance for success when members lay the foundation in the first mile for the last mile success and take mutual responsibility along the journey for leadership, management, and culture within the partnership

Bringing global road safety home

- **What:** to meet urgent health transportation needs in rural Ghana MAZA is a of drivers and motorized tricycles at the community level that are linked through a mobile technology platform. This platform integrates geographical information, mobile money savings and payments, information on the functionality of health care facilities, and patient feedback surveys to ensure reliability and drive continuous improvement.
- **Why:** In the rural areas of Ghana, sick people trying to get to hospital urgently face huge obstacles such as long distances, impassable roads, unavailability of vehicles, unreliable service, and lack of money to pay for appropriate transportation. Too often, this results in their death due to their getting to the hospital too late to be helped or they not going at all. MAZA, which means quickly in Hausa – the most widely spoken language in West Africa – seeks to reduce the incidence of such preventable deaths by providing an innovative social enterprise transportation solution at the community level that is affordable, accessible and reliable.
- **How:** MAZA achieves its goal by increasing the number of multi-purpose motorized vehicles at the community level through a lease-to-own (i.e. work-and-pay) model while ensuring their availability and reliability for urgent health transportation through a roster system, powered by mobile technology



Roundabouts Save Lives



Focus on crashes results in signals
Focus on injuries results in roundabouts

Roundabouts are one of the new “vaccines for road safety”

- 80-90% reduction of fatal injuries compared to traditional intersections in Sweden
- As effective as our best vaccines
- Generally well accepted by citizens

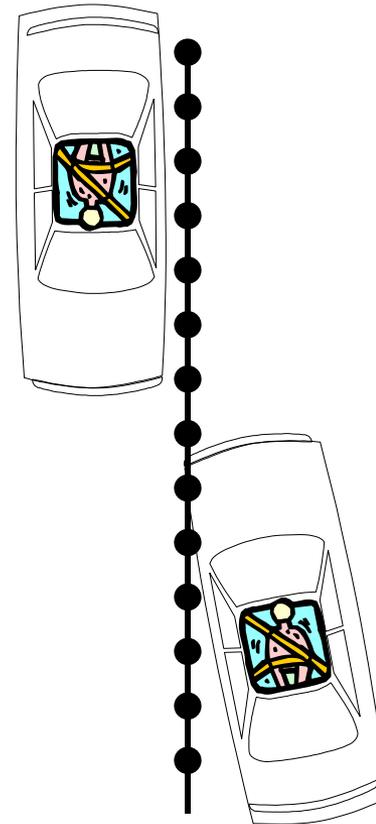
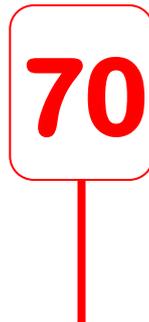
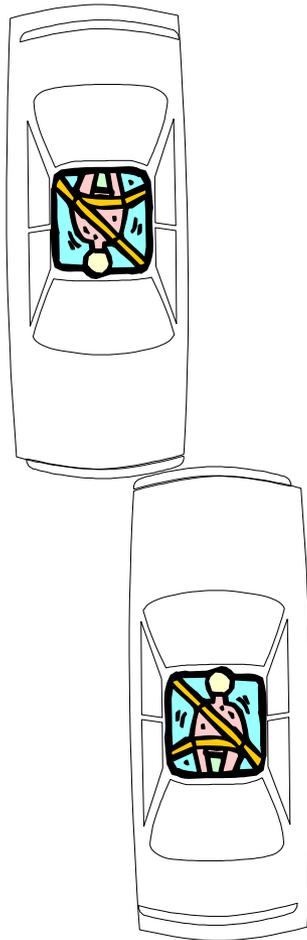
- A **wicked problem** is a problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize. The use of term "wicked" here has come to denote resistance to resolution, rather than evil. [\[1\]](#)

https://en.wikipedia.org/wiki/Wicked_problem

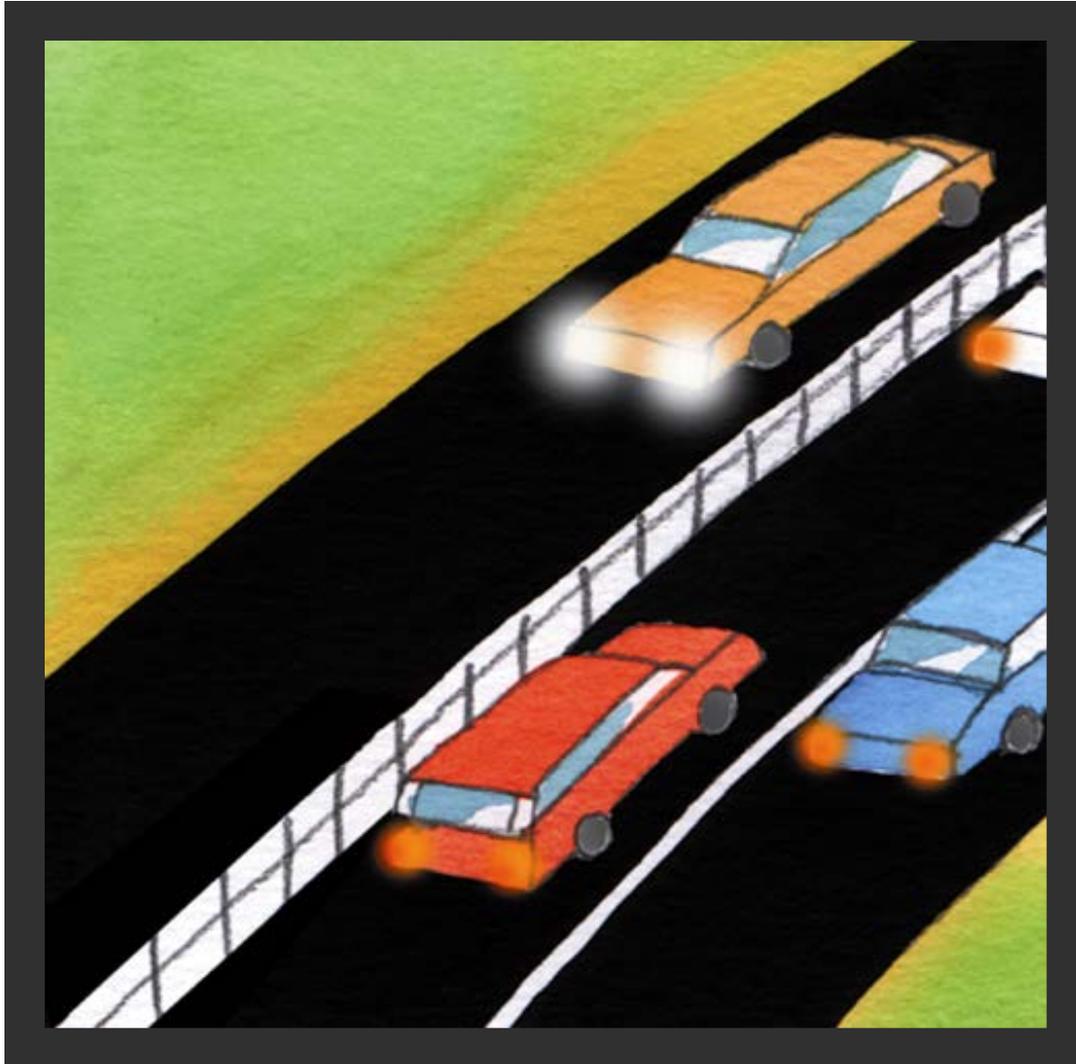
Extra

Slides

The Crashworthy System



Another Road Safety Vaccine: CENTER GUARD RAILS



On existing 13m wide roads

Results of mid barrier programme

- 70-80% reduction in deaths
- 10-20 times more cost effective than earlier, in fact a marginal decrease of the cost of saving lives.

the defining characteristics of a social mess are

- No unique “correct” view of the problem;
- Different views of the problem and contradictory solutions;
- Most problems are connected to other problems;
- Data are often uncertain or missing;
- Multiple value conflicts;
- [Ideological](#) and cultural constraints;
- Political constraints;
- Economic constraints;
- Often a-logical or illogical or multi-valued thinking;
- Numerous possible intervention points;
- Consequences difficult to imagine;
- Considerable uncertainty, ambiguity;
- Great resistance to change; and,
- Problem solver(s) out of contact with the problems and potential solutions.

https://en.wikipedia.org/wiki/Wicked_problem

Strategies to tackle wicked problems

- [\[edit\]](#)
- Wicked problems cannot be tackled by the traditional approach in which problems are defined, analysed and solved in sequential steps. The main reason for this is that there is no clear problem definition of wicked problems. In a paper published in 2000, Roberts identifies the following strategies to cope with wicked problems:[\[14\]](#)
- **Authoritative**
- These strategies seek to tame wicked problems by vesting the responsibility for solving the problems in the hands of a few people. The reduction in the number of stakeholders reduces problem complexity, as many competing points of view are eliminated at the start. The disadvantage is that authorities and experts charged with solving the problem may not have an appreciation of all the perspectives needed to tackle the problem.
- **Competitive**
- These strategies attempt to solve wicked problems by pitting opposing points of view against each other, requiring parties that hold these views to come up with their preferred solutions. The advantage of this approach is that different solutions can be weighed up against each other and the best one chosen. The disadvantage is that this adversarial approach creates a confrontational environment in which knowledge sharing is discouraged. Consequently, the parties involved may not have an incentive to come up with their best possible solution.
- **Collaborative**
- These strategies aim to engage all stakeholders in order to find the best possible solution for all stakeholders. Typically these approaches involve meetings in which issues and ideas are discussed and a common, agreed approach is formulated.
- In his 1972 paper,[\[15\]](#) Rittel hints at a collaborative approach; one which attempts "to make those people who are being affected into participants of the planning process. They are not merely asked but actively involved in the planning process". A disadvantage of this approach is that achieving a shared understanding and commitment to solving a wicked problem is a time-consuming process
- In Wholesome Design for Wicked Problems, Professor Robert Knapp states that there are ways forward in dealing with wicked problems. "The first is to shift the goal of action on significant problems from "solution" to "intervention." Instead of seeking the answer that totally eliminates a problem, one should recognize that actions occur in an ongoing process, and further actions will always be needed."[\[20\]](#)

https://en.wikipedia.org/wiki/Wicked_problem

Costs

- Every year, road traffic crashes cost an estimated:
 - USD \$518 billion globally
 - USD \$65 billion in low-income and middle-income countries, exceeding the total amount received in development assistance
 - 1-3% of countries' GDPs



Obstacles keep road safety from becoming a mainstream development issue

1. RTIs primarily affect developing countries—90% of the fatalities are in low- and middle-income nations.
2. Road traffic injuries happen one or two at a time.
3. Inadequate metrics limit ability to quantify the problem and to demonstrate the effectiveness of interventions.
4. Majority of victims are frequently vulnerable road users, very often those too poor to have cars, and bilateral aid agencies and governments currently do not take the needs of the urban poor into account in their infrastructure development strategies.
5. We are fatalistic, thinking that RTIs are just “accidents,” just an inevitable part of development—the price of mobility we all must bear.
6. Safety falls through the cracks: no one ministry takes ownership of road safety.
7. Faced with these obstacles, politicians don’t see road safety as an important problem, and without political will, the issue does not rise high on the development agenda

Collective irresponsibility for road safety

- Most people assume that road safety “belongs” to the Ministry of Transport
 - but the priority for the ministry of transport is usually road construction and their goal is to move more goods and vehicles farther and faster. They are usually busy with this and don’t have time for safety.
 - When a ministry of transport does pay attention to safety it is usually air safety, or railroad safety, or maritime safety— areas where governments often perceive a collective governmental responsibility; not road safety where the responsibility for safety is usually put onto individual drivers and road users.
 - Sometimes when a ministry of transport does have responsibility for road safety, it is limited to developing policies, not enforcing them.
- Ministries of roads usually focus on building more roads or repairing damaged roads, not building safe roads or upgrading old roads to make them safer.
- Police pay more attention to catching criminals and preventing violence than to catching traffic violators.
- And ministries of health these days have their hands full taking care of the infectious diseases—including HIV/AIDS, Tuberculosis, Malaria, flu, and Ebola— that have traditionally been the main focus of public health; they don’t have time to take on a problem that initially, at least seems to be under the control of other ministries.

Worsening Situation

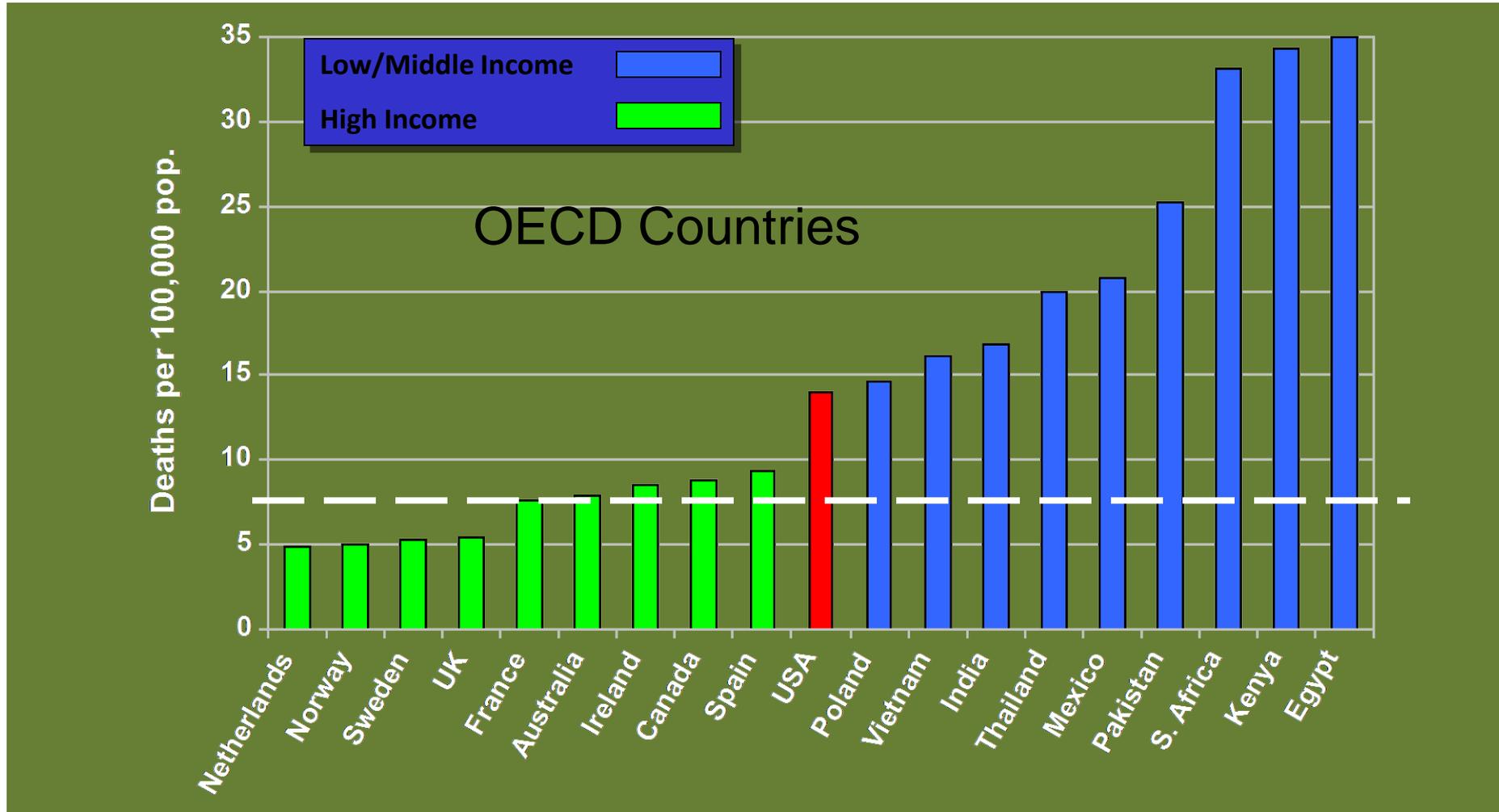
	LEADING CAUSE 2015	%
1	Ischaemic heart disease	12.2
2	Cerebrovascular disease	9.7
3	Lower resp. infectious	7.0
4	Chronic obstr. pulmonary disease	5.1
5	Diarrhoeal diseases	3.6
6	HIV/AIDS	3.5
7	Tuberculosis	2.5
8	Trachea, bronchus, lung cancers	2.3
9	Road traffic injuries	2.2
10	Prematurity & low birth weight	2.0

	LEADING CAUSE 2030	%
1	Ischaemic heart disease	12.2
2	Cerebrovascular disease	9.7
3	Chronic obstr. pulmonary disease	7.0
4	Lower resp. infectious	5.1
5	Road traffic injuries	3.6
6	Trachea, bronchus, lung cancers	3.5
7	Diabetes mellitus	2.5
8	Hypertensive heart disease	2.3
9	Stomach cancer	2.2
10	HIV/AIDS	2.0



International Comparison, 2007

MV Deaths per 100,000 population



-
- **By: Zadok Kwame Gyesei**Date :Tuesday, 29 December 2015 06:40
- Published in [General News](#)
- A non-governmental organisation has presented 13 improvised tricycle ambulances to help improve healthcare delivery in the Chereponi District of the Northern Region.
- The tricycle ambulances, worth GH¢104,000, were unveiled at a ceremony by the Chief Executive of the NGO, MAZA, Dr Nana A.Y. Twum-Danso.
- The tricycle ambulances are to help bridge the gap between people trying to access health care on urgent basis and healthcare providers trying to provide life-saving care in a timely manner.
- **Ambulances**
- At the launch in Chereponi, Dr Twum-Danso said the MAZA ambulances would complement the work of the National Ambulance Service (NAS) by positioning its vehicles at the community level.
- She explained that in the rural areas, sick people trying to get access to health facilities faced obstacles such as long distances, impassable roads, few motorised vehicles, unreliable transportation services and lack of money to pay for appropriate transportation.
- Dr Twum-Danso said with the introduction of the tricycle ambulances, patients in remote rural communities would be able to access health care at the health posts in the district.
- - See more at: <http://graphic.com.gh/news/general-news/55430-chereponi-gets-13-tricycle-ambulances.html#sthash.N188jiiR.dpuf>

- Some staff of the National Ambulance Service displaying how the tricycle ambulances could be used in emergency situations.

Intersection of Transportation and Public Health

Transportation

- Infrastructure
- Roads
- Vehicles
- Licensing
- Enforcement
- Mobility/Safety
- Industry/economy
- Development



Public Health

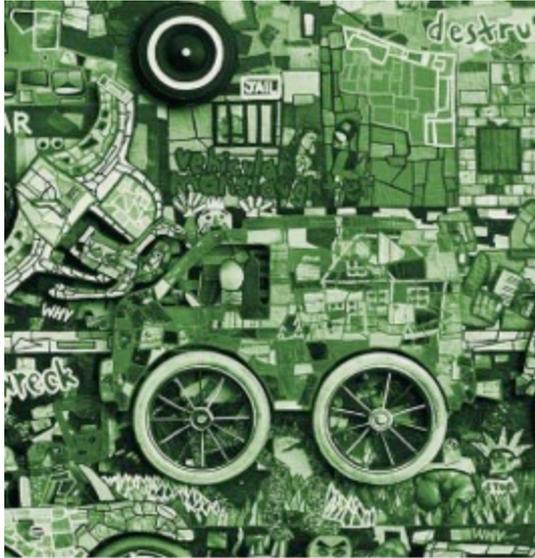
- Prevention
- People
- Illness/injury
- Health care
- EMS services
- Rehabilitation
- Development

Major Gaps in Global Road Traffic Injury Prevention

- Inaccurate data on the magnitude of the problem
- Inadequate use of evidence-based practices
- Inadequate evaluation of prevention efforts
- Limited awareness among policy makers, donors, and the public

Improve global surveillance

Global Status Report - 2009



**GLOBAL STATUS REPORT
ON ROAD SAFETY**

TIME FOR ACTION



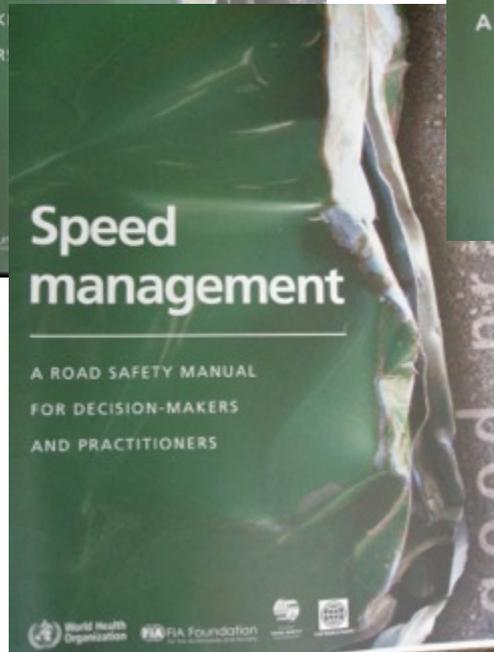
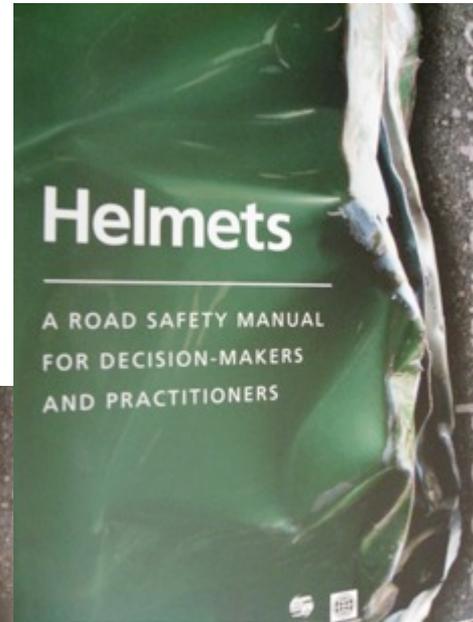
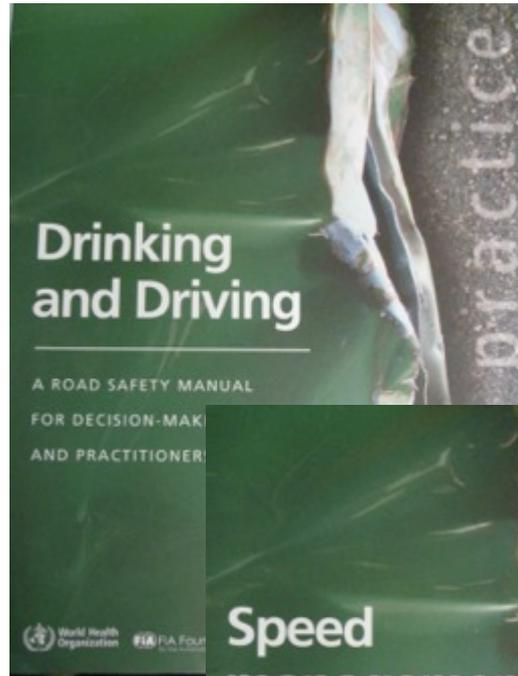
Key Intervention Strategies

- **Increasing Seat Belt Use**

- **Improving Licensing**
- **Increasing Enforcement**
- **Building safer roads**
- **Improving vehicle safety**
- **Post-crash care**



Good Practice Manuals



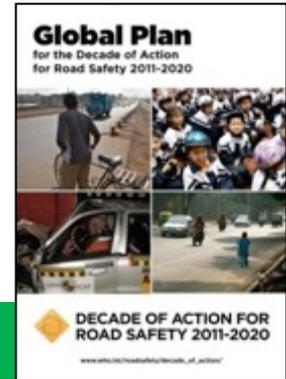


UNITED NATIONS GENERAL ASSEMBLY, 2nd March 2010:

***“Proclaims the period 2011-2020 as the Decade of Action for Road Safety,
with a goal to stabilize and then reduce
the forecast level of road traffic fatalities around the world”***



DECADE ACTION PLAN



Five pillars for a Safe Systems approach

Build Capacity



Safer Roads & Mobility



Safer Vehicles



Safer User Behavior



Post-crash Response



www.who.int/roadsafety/decade_of_action/

Motorcycle safety campaigns in Vietnam

- Low-cost tropical weight helmets
- Helmet use increased use from 10% to 90%
- 12% reduction in deaths
- 24% reduction in injuries (\$200M saved by Vietnam Govt)are



International Road Assessment Program (iRAP)



Inspections

More than 30 features that influence serious casualty risk for each 100m of road

North Coast Corridor - Indonesia Map



Safer Road Infrastructure Saves Lives



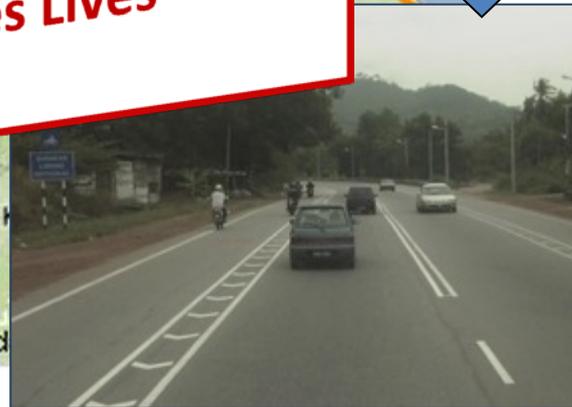
Star Ratings

For car occupants, pedestrians, bicyclists and motorcyclists



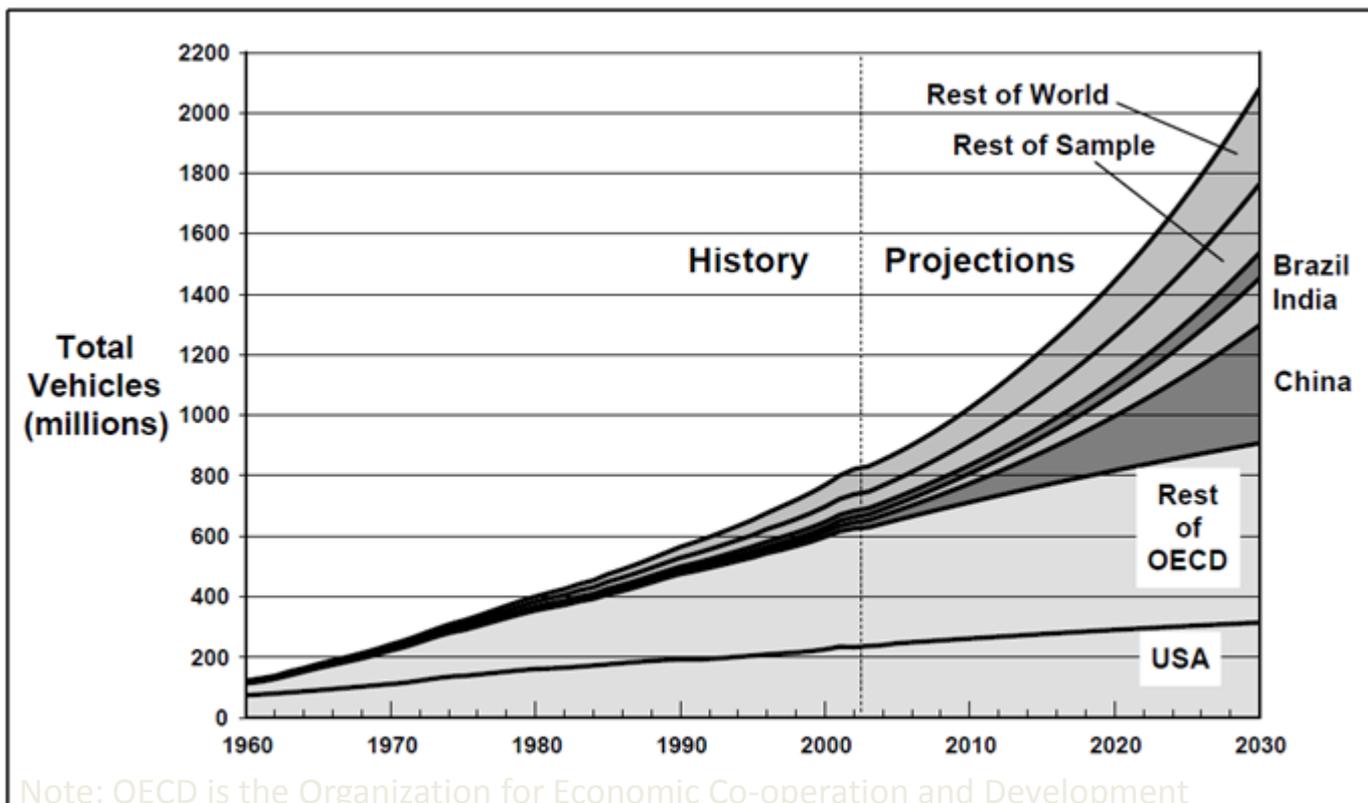
Training

For local engineers in risk assessment and countermeasures



Life-Saving Countermeasures

Recommendations for simple, affordable improvements



Source: Dargay, J., Gately, D., & Sommer, M. (2007).

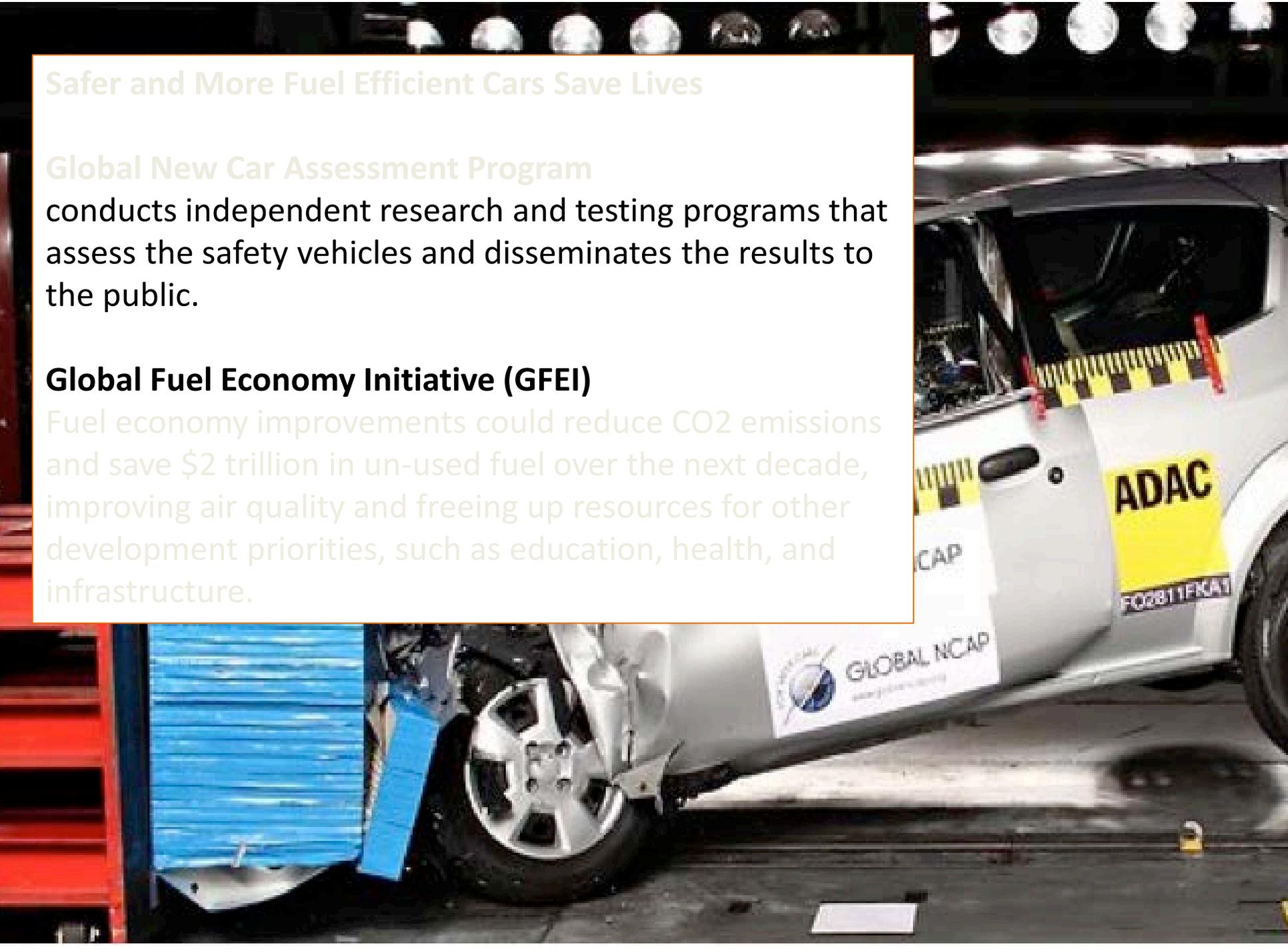
Safer and More Fuel Efficient Cars Save Lives

Global New Car Assessment Program

conducts independent research and testing programs that assess the safety vehicles and disseminates the results to the public.

Global Fuel Economy Initiative (GFEI)

Fuel economy improvements could reduce CO2 emissions and save \$2 trillion in un-used fuel over the next decade, improving air quality and freeing up resources for other development priorities, such as education, health, and infrastructure.



*Bringing Worlds Together...
...Creating New Possibilities for Health*

*The Perfect Plague:
An Epidemic of Road Deaths Will Kill
Fifty Million People*

AFINET Conference
Mombasa, Kenya—August 31, 2009

Mark L. Rosenberg, MD, MPP
The Center for Global Health Collaboration
The Task Force for Global Health



Road traffic injuries share a comparable burden of deaths when compared with Malaria or TB

Twelve leading causes of mortality, 2002

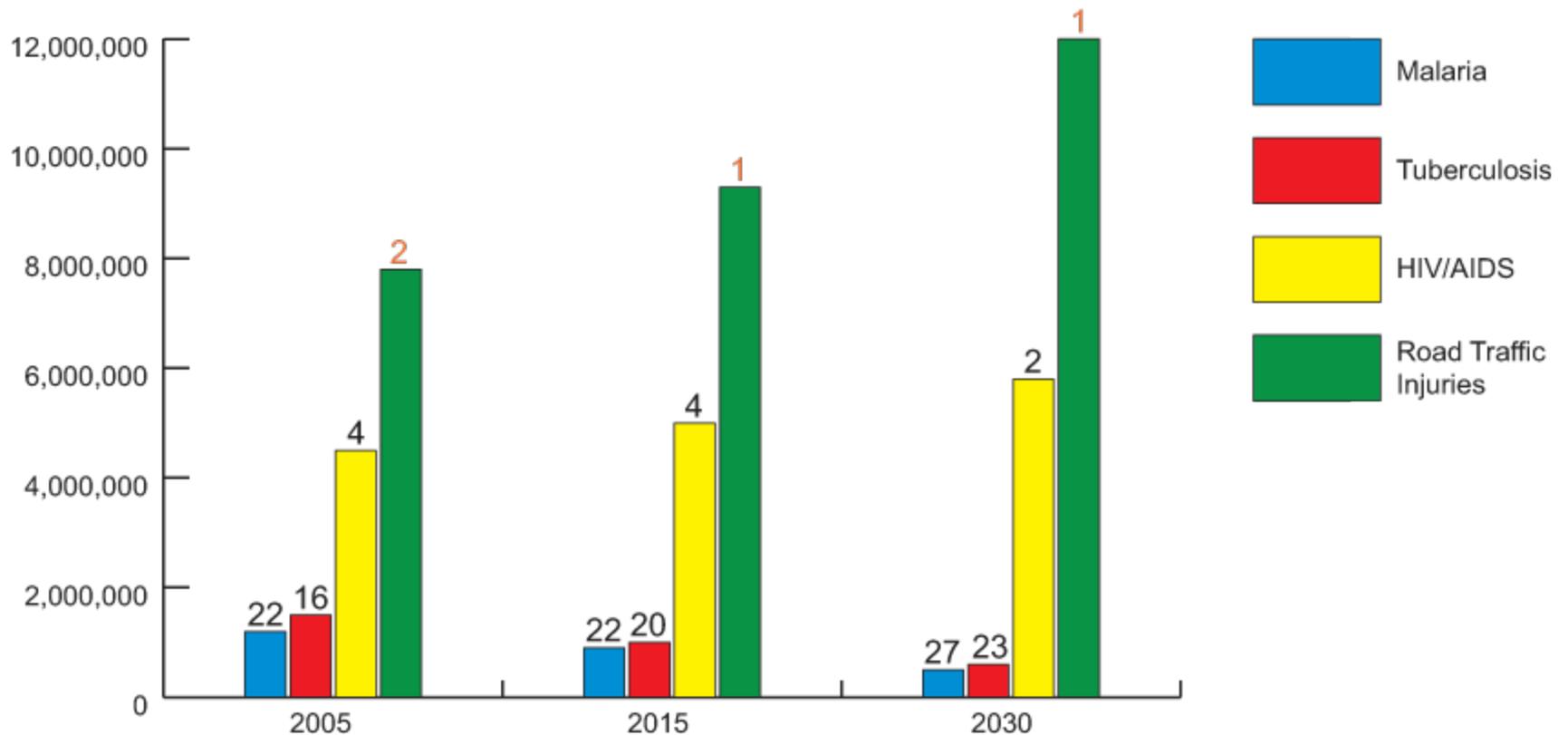
Rank Deaths	Cause	Proportion of total (%)
1	Ischaemic heart disease	12.6
2	Cerebrovascular disease	9.7
3	Lower respiratory infections	6.9
4	HIV/AIDS	4.8
5	Chronic obstructive pulmonary disease	4.8
6	Perinatal conditions	4.3
7	Diarrhoeal diseases	3.3
8	Tuberculosis	2.7
9	Trachea, bronchus, lung cancers	2.2
10	Road traffic injuries	2.1
11	Diabetes mellitus	1.7
12	Malaria	1.6





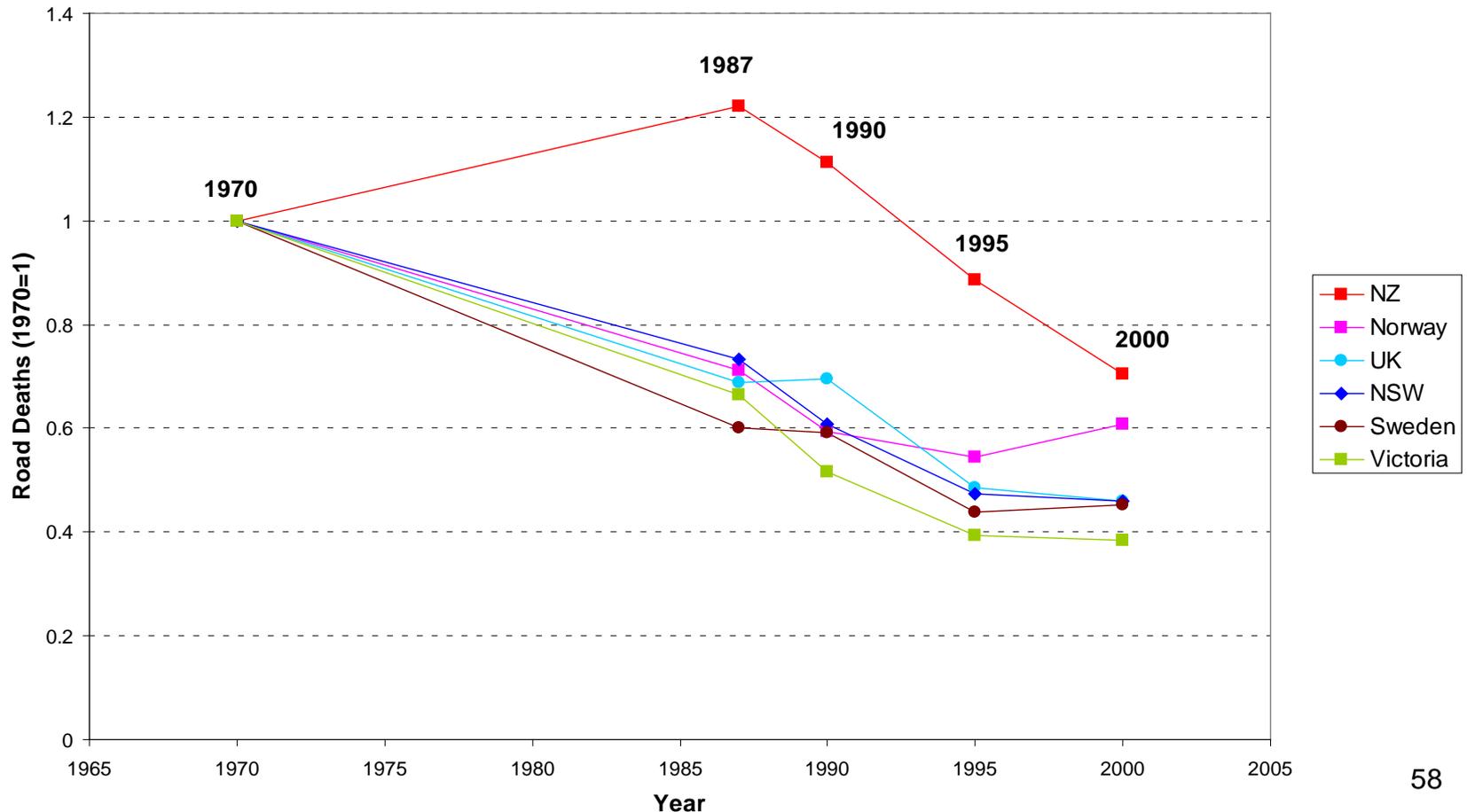
DALYS in Developing Countries (Children Age 5-14)

(DALYS = Disability Adjusted Life Years)



Road traffic death rates have been dramatically reduced in developed countries

- New Zealand started later than other countries but achieved a rapid decrease in road traffic death rates



Recommendations of the World Report

- ▣ Lead agency
- ▣ Assessment of problem, policies and institutional settings.
- ▣ National road safety strategy and plan of action.
- ▣ Allocation of financial and human resources.
- ▣ Implement specific actions: speed, impaired driving, seatbelts, helmets, and roadway design.
- ▣ International cooperation.

We have an intervention package that works

- speed
- impaired driving
- seatbelts
- helmets
- **roadway design**

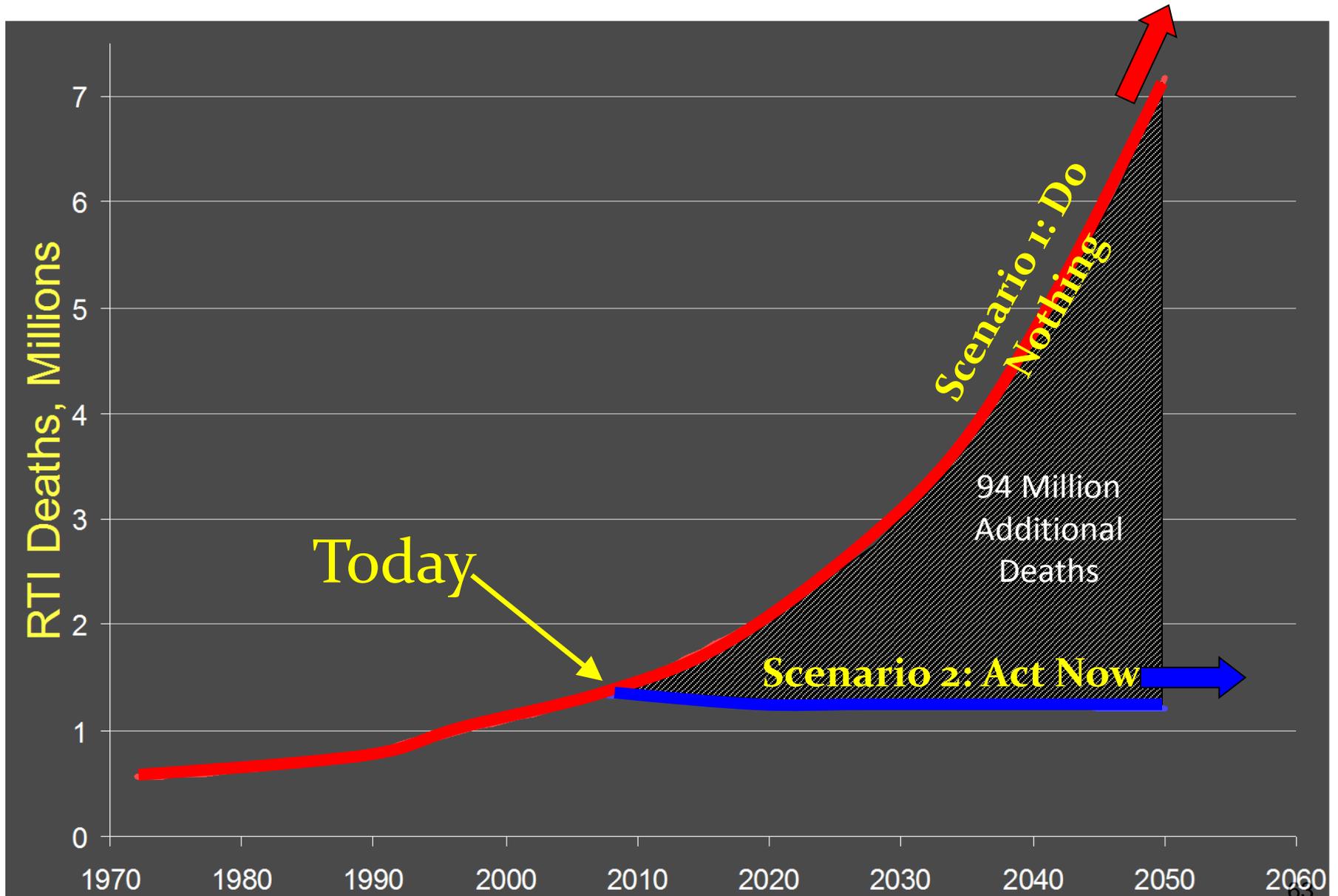


The Health Sector Must be An Important Partner Global Road Safety

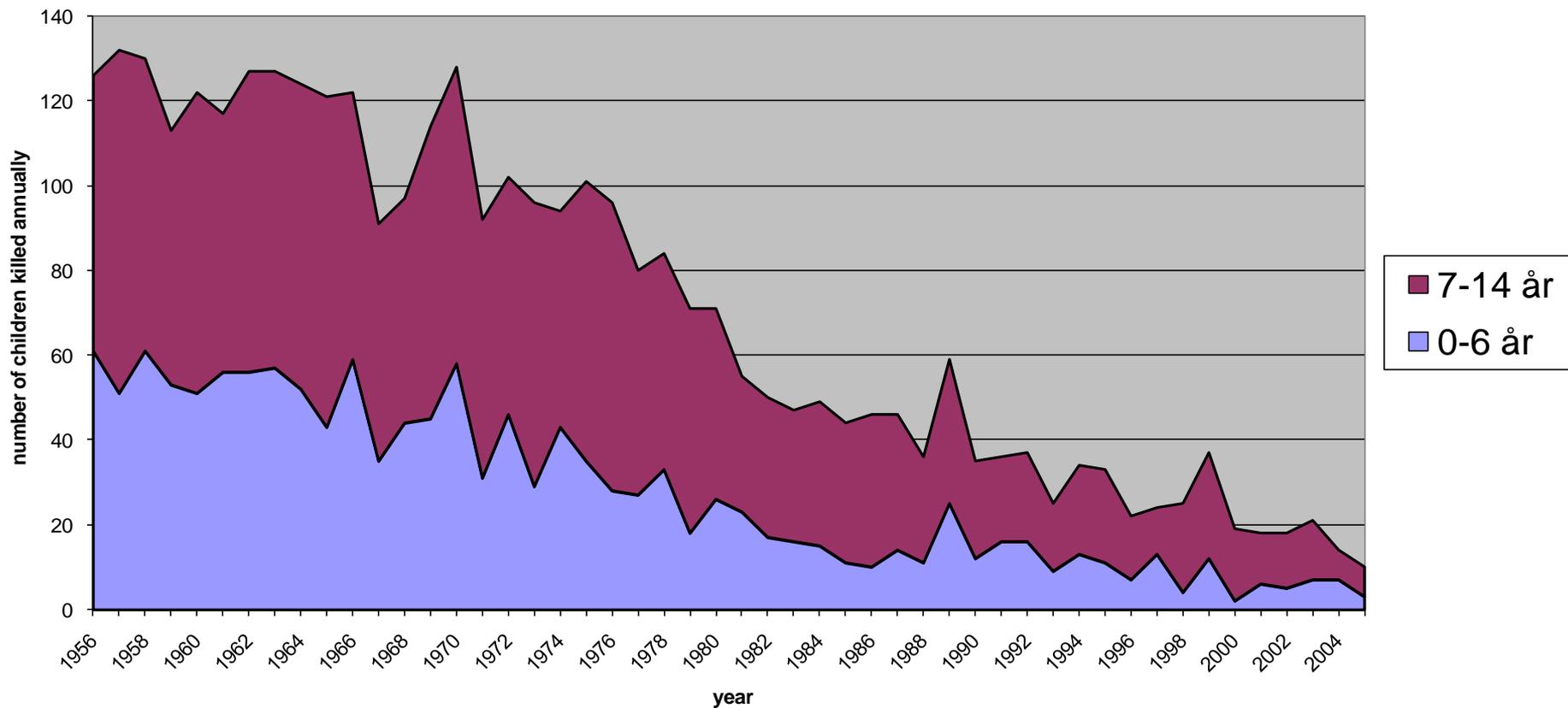
This is a Matter of Life or Death

- The health sector has resources in information systems, prevention, and care of injured victims that can help to turn around the exceedingly dangerous epidemic of road traffic injuries, an epidemic that will claim 50-75 million lives by 2050 if we are not successful in turning it around.
- But the health sector is otherwise occupied by traditional and newly emerging health threats, and held back by turf issues and it will not contribute its valuable resources unless we work actively to bring it about .
- Therefore we must be clear about what the health sector has to contribute and how we can work effectively to make that happen.

Preliminary Projections of RTI Deaths



Children killed in traffic in Sweden 1956-2005



Vision Zero

is an attitude, a strategy and a right

An attitude toward life: the loss of human life in traffic is unacceptable

- **A strategy for designing a safe road transport system:** Rather than ‘blaming the victim’ for causing crashes, the risk of human error is anticipated and ‘tolerated’ by a ‘forgiving’ system that has been designed to ensure that the consequences of human error are non fatal as far as possible. Streets and vehicles must adapted to the human capacity and tolerance and designed to protect the road users when mistakes inevitably occur.
- **Reciprocal rights and responsibilities:** Everyone has the right to travel in safety and the responsibility for safety is shared between those who design and those who use the road transport system.
- **The design challenge is to manage loss of control of kinetic energy within tolerances survivable by the human body.**

The idea of disease eradication led to the concept of *Vision Zero*

- 1959-- WHO published a report that estimated global eradication could be achieved in 4-5 years through a massive effort but administrative problems at WHO sapped the momentum.
- 1966--Bill Foege arrived in northern Nigeria in 1966 at a time when they had several hundred outbreaks of smallpox. They had been trying to immunize everyone, but they were running short of vaccine so he decided to use the vaccine only in those villages where there were active cases of smallpox.
- 1973 Foege was sent to India where there were 87,000 cases of smallpox and they were finding the situation quite hopeless. Foege again applied the containment strategy. Within two years the number of cases fell to no cases at all in the spring of 1975. Less than 3 years later, in May 1980, the World Health Organization declared the world free of naturally occurring smallpox. This was the first time that a devastating disease had ever been eradicated from the face of the earth. The eradication of a disease was an unprecedented accomplishment that demonstrated the benefits of international cooperation in public health

Lessons from Smallpox Eradication

1. It can take a very long time to apply what we know.
2. The successful resolution of problems in developed countries can contribute important new technologies but it can also result in overlooking the problem in the poorer countries.
3. There is a time when breakthroughs are possible and at that point the most important thing is to have a clear, overriding, and shared goal.



**Commission for
Global Road Safety**

Make Roads Safe Report

Key Recommendations:

- **A \$300 million, 10 year Action Plan to promote multi-sector national road safety capacity building in low and middle income countries should be funded by donor governments and private sources and managed by the World Bank Global Road Safety Facility;**
- **At a minimum 10% of all road infrastructure projects should be committed to road safety design, rating and assessment and community wide initiatives;**
- **A Ministerial Conference on Global Road Safety should be held in 2009 to review implementation of the World Report recommendations;**



MAKE ROADS SAFE

A NEW PRIORITY FOR SUSTAINABLE DEVELOPMENT

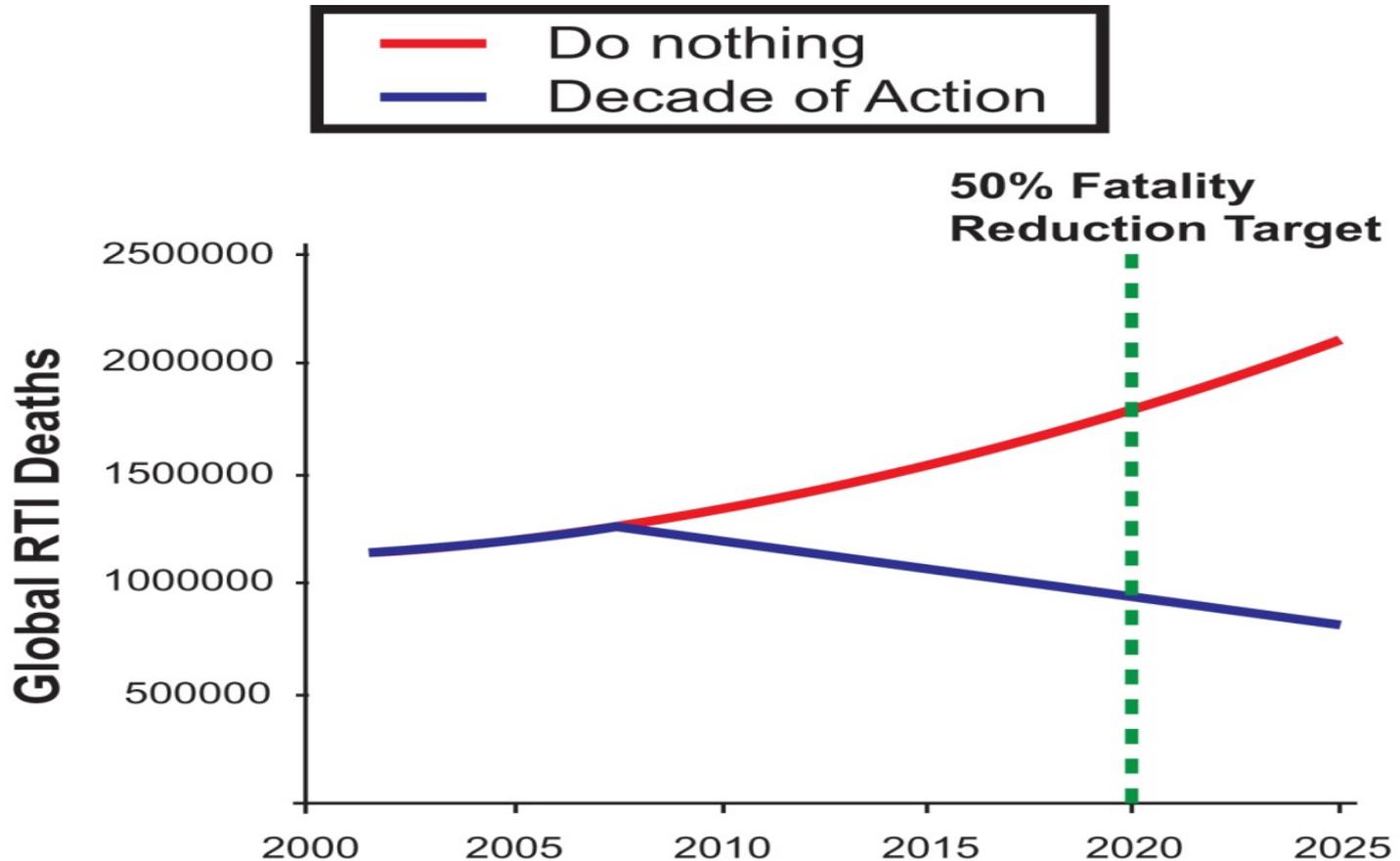
 **Commission for
Global Road Safety**



FIA Foundation
for the Automobile and Society



Commission for Global Road Safety

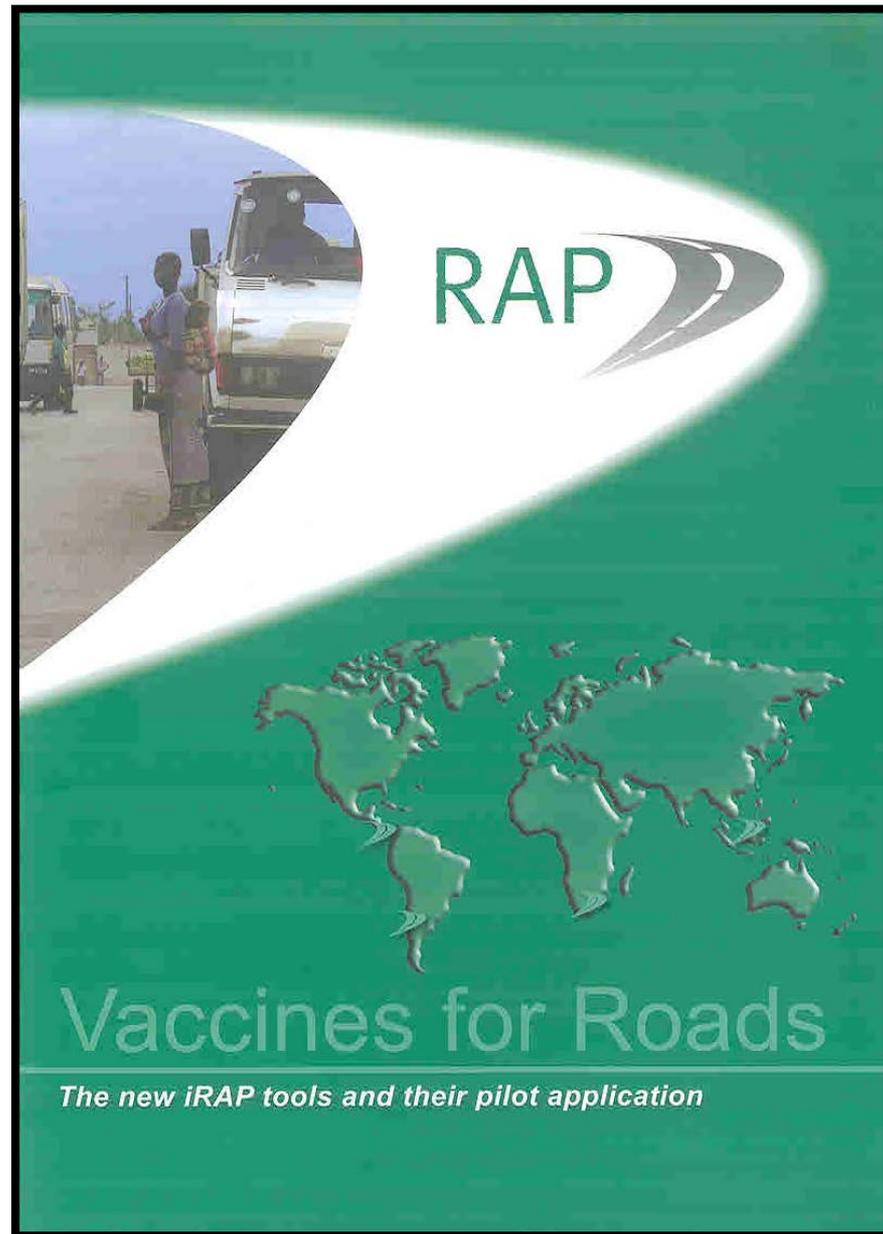


Green line shows possible road fatality savings by 2020 if a Decade of Action for Road Safety results in sustained governmental action for road injury prevention



Public Health has new tools available

- Identify the 10% of roadways that are responsible for 60-80% of deaths
- Road assessment needs to be followed by implementation of the recommendations
- Public health can play an important role in promoting road assessment as part of the public health approach:
 - Focused on prevention
 - Based on science
 - Collaborative by nature



“Knowing is not enough; we must apply. Willing is not enough; we must do.”

Goethe

With thanks to Don Berwick

Working towards Global Health Equity

- Vulnerable road users constitute the majority of victims in low- and middle-income countries.
- Most roads have been designed and continue to be designed without taking the needs of the vulnerable road users (pedestrians and cyclists) into account.
- Here is an area where you can help to understand and solve the problems of the poor and most vulnerable, save many lives, and work towards social justice.

How Epidemiologists Can Save Lives

- Road safety has some of the best buys in global health
- There are three phases to examine in road traffic injuries: prevention, acute care, rehabilitation. All are rich in the potential to save lives.
- Describe the problem (PH approach)
- Steal the very best methods and solutions that have evolved from infectious and non-infectious diseases

Multi-sectoral Collaboration is Not Easy

- A coalition is like a marriage: it is very easy to get into it but very hard to make it work
 - Stakeholders speak different languages, have different cultures and every organization has its standard operating procedures
 - There is competition for credit, power, and funding.
 - Obstacles (and opportunities) occur at every level: global, multinational agencies, regions, countries, communities.
- Each sector thinks it is not their responsibility.
 - Diffusion of agency responsibility—Inter-sectoral challenges can be particularly difficult
 - Stakeholders all have different “day jobs”
 - Each is already too busy with its own set of crises
- Road Safety is an underfunded area
 - No one is eager to control it or be responsible or accountable.

There are many ways to characterize and prevent pedestrian injuries

Crash Group	Countermeasures						
	Pedestrian Facility Design	Roadway Design	Intersection Design	Traffic Calming	Traffic Management	Signals and Signs	Other Measures
1. Dart/Dash	•	•		•	•	•	•
2. Multiple Threat/Trapped	•	•	•	•		•	•
3. Unique Midblock	•	•		•		•	•
4. Through Vehicle at Unsignalized Location	•	•	•	•	•	•	•
5. Bus-Related	•	•		•		•	•
6. Turning Vehicle	•	•	•	•	•	•	•
7. Through Vehicle at Signalized Location	•	•	•	•	•	•	•
8. Walking Along Roadway	•	•				•	•
9. Working or Playing in Roadway	•	•		•	•	•	•
10. Non-Roadway	•	•		•		•	•
11. Backing Vehicle	•	•		•			•
12. Crossing an Expressway	•					•	•

What kind of ancestors will we be?

We must work quickly:

- In AIDS, the public health community failed to respond to the problem as it was growing rapidly in developing nations. As a result, we ended up with the worst public health disaster the world has seen.

We must work together:

- “The biggest single failure in the fight against AIDS in the first 15 years of the pandemic was the failure to collaborate.”

Dr. Michael Merson, former Dean, Yale School of Public Health

We cannot make the same mistake again:

- Road crash fatalities in developing countries are expected to increase 83% between 2000 and 2020, and we must get ahead of the curve now—before the predicted explosion takes place.
- Unfortunately, the international community and the developed nations have still not responded adequately to this emerging crisis.
- We desperately need your support in this fight against the new global epidemic of road traffic injuries.

Special Thanks To

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The Center for Global Health Collaboration

The Task Force for Child Survival and Development

www.taskforce.org

**A Matter of Life or Death:
The Health Sector Must be An Important Partner
Global Road Safety**

The Center for Global Health Collaboration

Prince Mahidol Awards Conference

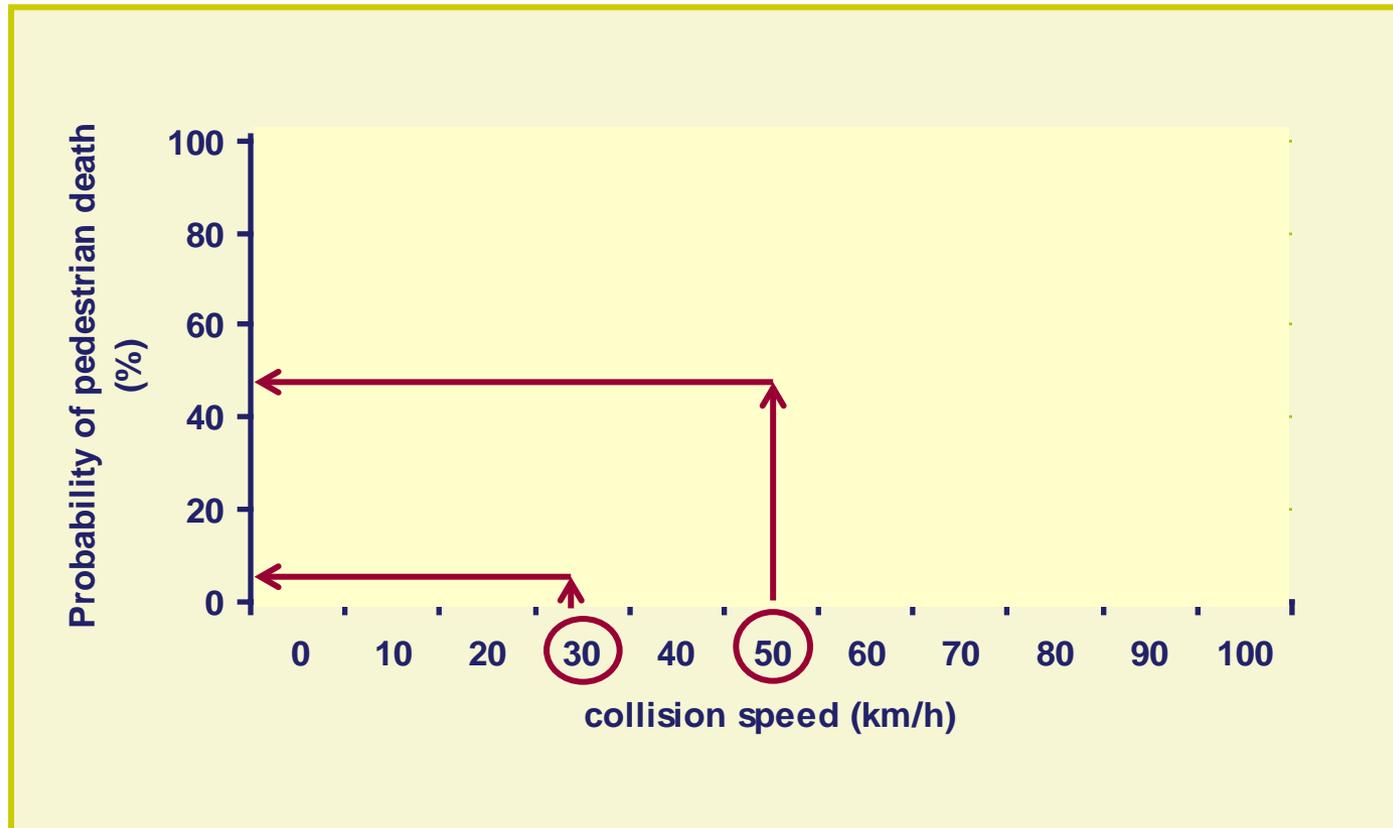
Mark Rosenberg and Lisa Hayes

January 29, 2009

Overview

- Story line
 - The health sector has resources in information systems, prevention, and care of injured victims that can help to turn around the exceedingly dangerous epidemic of road traffic injuries, an epidemic that will claim 50-75 million lives by 2050 if we are not successful in turning it around.
 - But the health sector is otherwise occupied by traditional and newly emerging health threats, and held back by turf issues and it will not contribute its valuable resources unless we work actively to bring it about .
 - Therefore we must be clear about what the health sector has to contribute and how we can work effectively to make that happen.

A key graph to understand road safety: Car – pedestrian crash



[wThanks toww.swov.nl--
thanks](http://wThanks.toww.swov.nl--thanks) Thanks to Fred
Wegman

30kph=18.6mph;
50kph=36.6mph
80kph=50 mph

This plague is slipping under the radar

It primarily affects developing countries—90% of the fatalities are in poor and middle income nations.

Road traffic injuries happen one or two at a time, thus not drawing attention.

We have inadequate metric systems to accurately quantify the problem; estimates are as much as ten times too low.

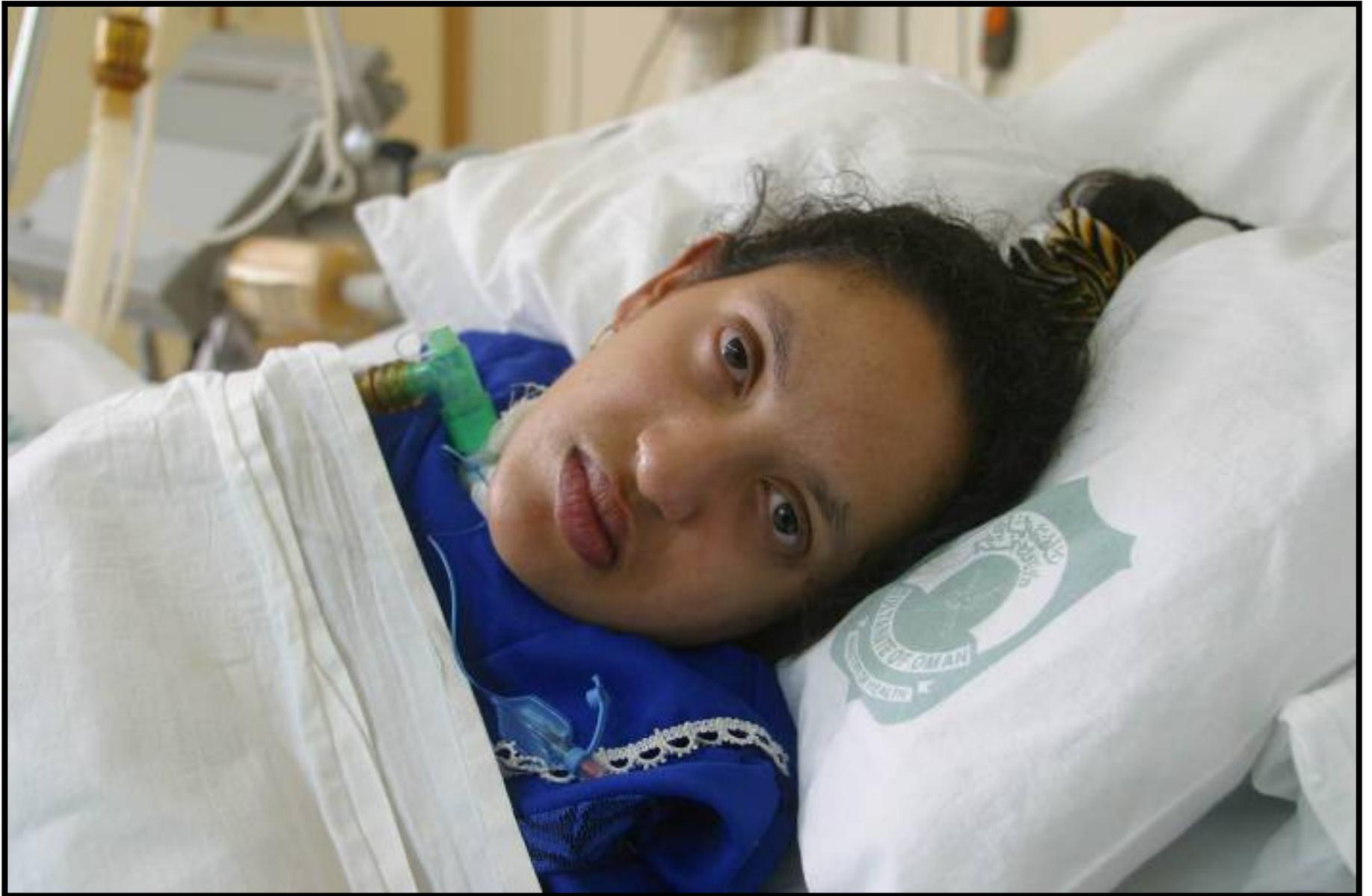
We are fatalistic and have become anesthetized, thinking that there is nothing that can be done, that RTIs are just “accidents,” just a part of development—the price of mobility.

The public health approach is a useful framework for bringing health into road safety

- **The core components of the public health approach:**
 - Focused on Prevention
 - Concerned with our future health
 - Deals with everybody's health (not just the doctor's own patients)
 - We know a lot about providing safe roads and providing safety for road users—we now have an obligation to apply it
 - Based in science
 - This is a cause and effect world—we can change the effects if we know the causes....and IF we act.
 - Public Health asks four questions: what is the problem, what are the causes, what works to prevent it, and how do you do it—how do you implement what works.
 - Traffic safety must be driven by ethics and scientific rules of evidence that are every bit as rigorous as those that govern treatment of the sick and injured
 - Collaborative by Design

NOUF KHAMIS
SAHEH





RTIs are an enormous barrier to development

The direct cost of road crashes is approximately **US\$518 billion annually**. On average, crash costs equal **1-1.5%** of developing nations' annual GDP.

Crashes cost developing nations **US\$65 billion every year**—more than double the amount of annual development assistance the region receives.

RTI victims are often household wage earners—often crashes push families into poverty and leave dependents without critical sources of financial support.