



WEEKLY EPIDEMIOLOGICAL REPORT

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Facts about Road Traffic Accidents (part 2)

Analysis of available crash data and other road traffic research show that while the main road safety problems experienced in various parts of the world often differ in quality and quantity, they have many characteristics in common. The dominant, common characteristics of the risks associated with road traffic are as follows:

- Unnecessary travel, the choice of less safe travel modes and routes, and unsafe mixes of traffic all lead to increased risk.
- The design of roads and road networks is an important factor. Exposure to risk is increased significantly by road networks failing to route heavy traffic around populated areas or to separate pedestrians from motorized traffic.
- Excessive and inappropriate speed is widespread and may contribute to around 30% of road traffic crashes and deaths. In collisions at 80 km/h, car occupants run a 20 times higher risk of being killed than at 30 km/h. Pedestrians have a 90% chance of surviving car crashes at 30 km/h or below, but less than a 50% chance of surviving impacts at 45 km/h or above.
- Impairment by alcohol continues to contribute to crash injury and increases the risk. All non-zero blood alcohol content (BAC) levels carry more risk than zero BAC, and crash risk starts to rise sharply at levels of 0.04 g/dl. Legal BAC limits set at 0.10 g/dl allow three times more risk than limits set at 0.05 g/dl; at 0.08 g/dl, the risk is twice as much as that at 0.05 g/dl.
- Young novice drivers are at increased risk of crash injury; the risk among teenage drivers is higher than among any other comparable age group. Excessive or inappropriate speed is a common contributory factor in crashes involving young drivers.
- Pedestrians, cyclists and motorized two-wheeler users bear a disproportionate share of the global road injury burden and are all at high risk of crash injury.

- For all road users, the risk of crash injury is increased by failing to see and failing to be seen. If daytime running lights were fitted and used, almost a third of all motorized two-wheeler crashes involving lack of visibility could be avoided; in the case of cars, more than 10% of such crashes could be avoided.
- The non-use of seat belts and child restraints more than doubles the risk of serious and fatal injury, as does the non-use of bicycle helmets. Similarly, the non-use of crash helmets by motorized two-wheeler users almost doubles their risk of serious or fatal head injury.
- Crash analysis shows that the majority of pedestrian fatalities involve impact with unprotective car fronts. If all cars were designed to provide protection equivalent to that of the best car in the same class, an estimated half of all fatal and disabling injuries to car occupants would be avoided. Roadside design and the positioning of roadside objects play key roles in determining crash injury, as well as influencing the behaviour of road users.
- Inadequate post-crash care is a major problem in many places. The availability and quality of such care has a substantial effect on whether a road traffic injury leads to subsequent death or disability.
- The availability in low-income countries of data on road traffic crashes is often basic. For proper understanding of the risk factors predominating in local settings, more investment for systematic, independent and high-quality research is needed, particularly from high-income countries. Such worldwide research into the causes of crashes and crash injury is essential for achieving safer traffic systems.

**Risk factors could be summarized as follows
Factors influencing exposure to risk**

- Economic factors, including social deprivation
- Demographic factors

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- Land use planning practices which influence the length of a trip or travel mode choice
- Mixture of high-speed motorized traffic with vulnerable road users
- Insufficient attention to integration of road function with decisions about speed limits, road layout and design

Risk factors influencing crash involvement

- Inappropriate or excessive speed
- Presence of alcohol, medicinal or recreational drugs
- Fatigue
- Being a young male
- Being a vulnerable road user in urban and residential areas
- Travelling in darkness
- Vehicle factors – such as braking, handling and maintenance
- Defects in road design, layout and maintenance which can also lead to unsafe road user behaviour
- Inadequate visibility due to environmental factors (making it hard to detect vehicles and other road users)
- Poor road user eyesight

Risk factors influencing crash severity

- Human tolerance factors
- Inappropriate or excessive speed
- Seat-belts and child restraints not used
- Crash helmets not worn by users of two-wheeled vehicles
- Roadside objects not crash protective
- Insufficient vehicle crash protection for occupants and for those hit by vehicles
- Presence of alcohol and other drugs

Risk factors influencing severity of post-crash injuries

- Delay in detecting crash
- Presence of fire resulting from collision
- Leakage of hazardous materials
- Presence of alcohol and other drugs
- Difficulty in rescuing and extracting people from vehicles
- Difficulty in evacuating people from buses and coaches involved in crash
- Lack of appropriate pre-hospital care
- Lack of appropriate care in the hospital emergency rooms

Actions for road safety

Taking decisions to improve road safety is a prime responsibility of the governors of a country. However public also has a key role to play for road safety.

What governments can do

- Institutional development
- Make road safety a political priority.
- Appoint a lead agency for road safety, give it adequate resources, and make it publicly accountable.
- Develop a multidisciplinary approach to road safety.
- Set appropriate road safety targets and establish national road safety plans to achieve them.
- Support the creation of safety advocacy groups.
- Create budgets for road safety and increase investment in demonstrably effective road safety activities.

Policy, legislation and enforcement

- Enact and enforce legislation requiring the use of seat-belts

and child restraints, and the wearing of motorcycle helmets and bicycle helmets.

- Enact and enforce legislation to prevent alcohol-impaired driving.
- Set and enforce appropriate speed limits.
- Set and enforce strong and uniform vehicle safety standards.
- Ensure that road safety considerations are embedded in environmental and other assessments for new projects and in the evaluation of transport policies and plans.
- Establish data collection systems designed to collect and analyse data and use the data to improve safety.
- Set appropriate design standards for roads that promote safety for all.
- Manage infrastructure to promote safety for all.
- Provide efficient, safe and affordable public transport services.
- Encourage walking and use of bicycles.

What public health can do

- Include road safety in health promotion and disease prevention activities.
- Set goals for elimination of unacceptable health losses arising from road traffic crashes.
- Systematically collect health-related data on the magnitude, characteristics and consequences of road traffic crashes.
- Support research on risk factors and on development, implementation, monitoring and evaluation of effective interventions, including improved care.
- Promote capacity building in all areas of road safety and management of survivors of road traffic crashes.
- Translate effective science-based information into policies and practices that protect vehicle occupants and vulnerable road users.
- Strengthen pre-hospital and hospital care as well as rehabilitation services for all trauma victims.
- Develop trauma care skills of medical personnel at the primary, district and tertiary health care levels.
- Promote further integration of health and safety concerns into transport policies and develop methods to facilitate this, such as integrated assessments.
- Campaign for greater attention to road safety, based on known health impact and costs.

What vehicle manufacturers can do

- Ensure that all motor vehicles meet safety standards set for high-income countries regardless of where the vehicles are made, sold or used including the provision of seat belts and other basic safety equipment.
- Begin manufacturing vehicles with safer vehicle fronts, so as to reduce injury to vulnerable road users.
- Continue to improve vehicle safety by ongoing research and development.
- Advertise and market vehicles responsibly by emphasizing safety.

Source:

*World Report on RoadTraffic Injury Prevention
Annual Health Bulletin 2005-2006*

This article was compiled by Dr M G Malawaraarachchi,

Table 1: Vaccine-preventable Diseases & AFP

29thAugust-04th September 2009 (36th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2009	Number of cases during same week in 2008	Total number of cases to date in 2009	Total number of cases to date in 2008	Difference between the number of cases to date in 2009 & 2008
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	01	00	01	00	00	00	00	00	00	02	00	53	70	-30.0%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	00	14	00	00	00	00	00	14	00	134	90	+48.9%
Tetanus	00	00	00	00	00	01	00	00	00	01	00	19	27	-29.6%
Whooping Cough	01	02	00	00	00	00	01	00	00	04	03	44	36	+22.2%
Tuberculosis	63	07	15	03	08	00	08	20	24	148	174	7116	6378	11.6%

Table 2: Newly Introduced Notifiable Disease

29thAugust-04th September 2009 (36th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2009	Number of cases during same week in 2008	Total number of cases to date in 2009	Total number of cases to date in 2008	Difference between the number of cases to date in 2009 & 2008
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	08	02	06	202	13	02	05	06	11	255	78	12344	3788	+225.9%
Meningitis	10 CB=5 KL=5	02 KN=1 ML=1	00	00	07 AM=1 BT=1 KM=5	04 KR=4	01 AP=1	00	04 RP=4	28	24	802	966	-16.9%
Mumps	02	02	03	01	07	00	03	00	02	20	55	1348	2051	-34.3%
Leishmaniasis	00	00	07 MT=6 HB=1	00	00	00	01	00	00	08	Not available*	521	Not available*	-

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
 DPDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matala, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

Table 4: Surveillance of Communicable diseases among IDP's 29thAug-04th Sept 2009 (36th Week)

Area	Disease	Dysentery	Enteric fever	Viral Hepatitis	Chicken Pox	Watery Diarrhoea
Vavunia		0	6	1	2	-
Chendikulam		39	134	19	202	311
Total		39	140	20	204	311

Table 4: Selected notifiable diseases reported by Medical Officers of Health
29th August-04th September 2009 (36th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received Timely**
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%		
Colombo	28	3320	4	154	1	10	14	157	0	45	81	502	0	5	2	92	0	4	85
Gampaha	59	3203	1	117	0	18	0	32	3	16	12	248	1	8	13	146	0	3	87
Kalutara	11	1286	4	275	0	11	1	47	0	43	20	202	0	1	0	64	0	2	83
Kandy	30	3495	5	218	0	6	0	23	0	55	0	162	7	134	2	95	0	0	80
Matale	20	1394	7	91	0	2	0	26	0	6	5	292	0	5	11	68	0	2	92
Nuwara Eliya	4	215	3	351	0	2	0	149	0	786	1	33	1	60	1	67	0	0	100
Galle	11	476	9	188	0	10	0	3	0	42	3	125	0	9	1	27	0	4	95
Hambantota	10	773	2	71	0	8	0	6	0	12	1	58	1	65	0	38	0	0	82
Matara	36	999	4	219	0	4	0	5	0	16	9	123	7	108	2	48	0	1	100
Jaffna	0	12	0	87	0	3	2	207	0	28	0	0	0	124	0	159	0	2	13
Kilinochchi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mannar	0	5	1	70	0	1	1	93	0	4	0	0	0	0	0	54	0	0	50
Vavuniya	7	28	32	1483	0	21	25	367	0	2	0	3	0	2	21	3454	0	0	75
Mullaitivu	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Batticaloa	8	505	1	206	0	12	0	12	0	50	0	9	0	2	0	17	0	4	73
Ampara	2	209	6	39	0	0	0	11	0	8	0	10	0	2	4	28	0	0	86
Trincomalee	3	321	11	93	0	3	1	8	0	1	0	17	0	19	4	42	0	1	70
Kurunegala	36	2419	8	148	0	9	2	53	3	12	2	87	1	66	2	118	0	4	85
Puttalam	1	526	1	121	0	7	1	63	0	2	2	72	0	31	3	30	0	1	78
Anuradhapur	5	501	4	91	0	4	1	6	0	20	0	81	0	28	5	164	0	3	84
Polonnaruwa	4	142	5	47	1	3	0	20	0	6	0	56	0	9	4	57	0	0	71
Badulla	3	257	14	216	0	2	0	34	0	19	2	76	4	95	2	264	0	1	53
Monaragala	3	139	7	83	0	1	0	23	0	13	0	13	3	58	1	77	0	1	91
Ratnapura	32	1838	1	401	0	19	1	46	4	12	9	217	0	31	15	141	0	1	83
Kegalle	44	3377	3	135	0	8	0	34	0	6	7	158	0	25	3	179	0	1	82
Kalmunai	5	166	0	79	0	1	0	13	0	3	0	3	0	3	0	16	0	0	69
SRI LANKA	362	25606	133	4985	2	165	49	1439	10	1207	154	2547	25	890	96	5445	0	35	78

Source: Weekly Returns of Communicable Diseases WRCD).

*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.

**Timely refers to returns received on or before 04th September, 2009 Total number of reporting units =311. Number of reporting units data provided for the current week: 245

A = Cases reported during the current week. B = Cumulative cases for the year.

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