WEEKLY EPIDEMIOLOGICAL REPORT

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Road traffic accidents– a major global killer

Road traffic injuries are a major but neglected public health problem that requires concerted efforts for effective and sustainable prevention. Of all the systems with which people have to deal every day, road traffic systems are the most complex and the most dangerous. World-wide, an estimated 1.2 million people are killed in road crashes each year and as many as 50 million are injured. The incidence of road traffic accidents is skyrocketing in the world. More than 3000 people die on the world's roads every day while tens of millions of people are injured or disabled due to road traffic accidents every year. Children, pedestrians, cyclists and the elderly are among the most vulnerable of road users. It is anticipated that the number will grow to more than 2 million in 2020 unless steps are taken according to the results of a study released by the World Health Organization and the World Bank.

Low-income and middle-income countries account for 85% of the deaths and for 90% of the annual disability- adjusted life years lost because of road traffic injury. While road traffic death rates in many high-income countries have stabilized or declined in recent decades, research suggests that deaths attributable to road traffic accidents are increasing in most regions of the world and that if trends continue unabated, they will rise to a staggering estimate of 2.4 million a year by 2030. In addition, road crashes cause between 20 million and 50 million non-fatal injuries every year and are an important cause of disability. In many countries support services for road traffic victims are inadequate while these avoidable injuries also overload already stretched health-care systems.

The factors influencing road traffic accidents include human, the vehicle and the road. Alcohol and drugs of intoxication too account for a large proportion of road traffic accidents world-wide. In the developing world, roads are poorly built and are poorly maintained. As a result, roads have become death traps for many people. Vehicles poorly maintained due to poverty, ignorance and corruption among law enforcement agents. Though they contribute significantly to morbidity, mortality and disability, all these factors are amenable to control by government policies.

A study by K. Rumar, using British and American crash in 1985 reported that 57% of crashes were due solely to driver factors, 27% to combined roadway and driver factors, 6% to combined vehicle and driver factors, 3% solely to roadway factors, 3% to combined roadway, driver, and vehicle factors, 2% solely to vehicle factors and 1% to combined roadway and vehicle factors. On 15 June 2009, in Geneva and New York, the first global assessment of road safety was carried out. It was found that almost half of the estimated 1.27 million people who die in road traffic crashes every year are pedestrians, motorcyclists and cyclists. While progress has been made towards protecting people in cars, the needs of these vulnerable groups of road users are not being met.

The assessment has revealed that less than a third of countries meet basic criteria for reducing speed in urban areas. Further, it has disclosed that less than a half of countries use the recommended blood alcohol concentration limit of 0.05 grams per deciliter as a measure to reduce drink-driving. While helmet laws exist in more than 90% of the countries, only 40% have a law

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that covers both riders and passengers and also the requirement that helmets meet a specified standard. Only 57% of the countries have laws that require all car occupants to wear seat-belts. This figure is only 38% in low-income countries. Half of all countries do not have laws requiring the use of child restraints (e.g., child seats and booster seats). This figure masks considerable variation of relevant laws in the globe. For example, 90% of high-income countries have laws but the same is only 20% in low-income countries. Only 15% of the countries have comprehensive laws which address all these risk factors. On the other hand, where laws on these risk factors are in place, they are often inadequately enforced, particularly in low-income countries. For example, only 9% of countries rate their enforcement of speed limits as over seven on a scale of zero to ten while the corresponding figure for enforcement of seat-belt laws is 19%.

According to Dr Etienne Krug, the Director of WHO's Department of Violence and Injury Prevention and Disability, more than 90% of the world's road deaths occur in low-income and middle-income countries, while these countries only have 48% of the world's vehicles. Our roads are particularly unsafe for pedestrians, cyclists and motorcyclists who, without the protective shell of a car around them, are more vulnerable. These road users need to be given increased attention. Measures such as building sidewalks, raised crossings and separate lanes for two wheelers, reducing drink-driving and excessive speed, increasing the use of helmets and improving trauma care are some of the interventions that could save hundreds of thousands of lives every year." The report elaborates that road traffic injuries remain very relevant in high-income countries. Even the top performing global countries are often stagnating and still have considerable room for improvement in achieving a truly safe road transport system," Dr Krug said.

In Sri Lanka, trauma and other injuries have remained the leading cause of hospitalization since 1995. However there is a rise of 84.5% in road traffic fatality rates from 1975 to 1998. In 2003, 16.7% of total admissions and 11% of deaths in government health institutions were due to injuries. The trauma burden is significant across all districts and trauma has been ranked as the number one cause for hospital admissions in 18 of the 23 districts in Sri Lanka. Road traffic injuries and associated deaths have reached epidemic proportions in Sri Lanka, resulting in 2,000 deaths and 14,000 injuries each year. Driving under the influence of alcohol is one of the main factors that account for road traffic injuries in Sri Lanka. From 1996 to 2000, the number of road traffic injuries associated with drink driving doubled while the number of total accidents increased only by 12%. Factors attributable to the driver such as overtaking, speeding, turning without signals are also common causes leading to road accidents in the country.

A study of prevalence of risk factors for road traffic accidents was carried out in Kandy area has evaluated alcohol use, helmet use, seat belt use and possession of valid a driving license amongst drivers. It was found that traffic injuries related to alcohol consumption is well known. Similarly, random breath testing has shown to reduce alcohol related crashes by 20%. It appears that 1/20th of drivers are drunk at their wheels irrespective of the time of the day in Kandy. This number appears to have doubled since 1998 when it was 2.5%. Use of helmets has been shown to reduce fatal and serious head injuries by between 20% and 45% and has transpired to be the most successful approach for preventing injury among motorized two wheeler riders. Further, it has been demonstrated that 7%, i.e. 1/13th of our drivers on the roads are not competent to drive or ride. In 83% of vehicles seat belts were available but 86.45% drivers chose not to wear seat belts.

Without immediate action to improve road safety, it is estimated that road traffic deaths will increase by 80% in low and middle income countries by 2020. Most of the accidents are reported to have been caused by buses and the rest were by dual purpose vehicles, lorries, containers, three-wheelers, motor car/jeeps. Seven out of 10 accidents occur between noon and midnight while 40% of all the accidents and a half of the fatal accidents have occurred between 6 pm and midnight. One-third of the victims are pedestrians, while both pedestrians and passengers accounted for half (55%) of the total number of victims. As far as the age is concerned, about half of the victims were between the ages of 21 and 55. Today, road traffic accidents are not only a pubic health problem. but has a significant economic aspect as well. Based on this significance, the *World report on road traffic injury prevention,* the first major report of its kind has been jointly issued by the World Health Organization (WHO) and the World Bank. It underscores their concern that unsafe road traffic systems are seriously harming global public health and development. It contends that the level of road traffic injury is unacceptable and that it is largely avoidable.

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Editor wishes to thank Dr. Upekha Seneviratne for compiling this article.

Table 1: Vaccine-preventable Diseases & AFP

06th – 12th May 2009 (24th 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	00	01	00	01	00	00	00	03	02	39	45	-13.3%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	00	00	00	00	00	00	00	00	01	63	59	+06.8%
Tetanus	00	00	00	00	00	00	00	00	00	00	01	13	18	-27.8%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	30	19	+36.7%
Tuberculosis	73	04	06	01	23	12	00	01	22	142	172	4521	4707	-03.9%

Table 2: Newly Introduced Notifiable Disease

06th – 12th May 2009 (24th 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	21	06	14	383	04	06	06	12	11	463	86	9741	2769	+251.8%
Meningitis	04 CB=3 KL=1	01 KD=1	03 GL=2 MT=1	00	00	09 KR=2 PU=7	00	02 MO=1	05 KG=3 RP=2	24	21	487	735	-33.7%
Mumps	01	00	03	14	01	05	03	08	04	39	75	905	1223	-26.0%
Leishmaniasis	00	00	07 HB=5 MT=2	00	00	00	01 PO=1	00	00	08	Not available*	428	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: Matale, 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 3: Laboratory Surveillance of Dengue Fever

06th – 12th May 2009 (24th Week)

Samples	Number tested	Number positive	Serotypes *				
			D1	D2	D3	D4	Negative
Number for current week	00	00	00	00	00	00	00
Total number to date in 2009	53	10	03	03	04	00	00

Sources: Genetic Laboratory, Asiri Surgical Hospital

* Not all positives are subjected to serotyping.

NA= Not Available.

Table 4: Selected notifiable diseases reported by Medical Officers of Health

06th – 12th May 2009 (24th 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	A	B	%
Colombo	209	1571	6	98	0	6	2	89	2	38	16	283	0	4	3	40	1	4	**92**
Gampaha	165	1284	1	80	0	14	0	25	0	9	9	151	0	7	5	42	0	2	**67**
Kalutara	33	459	1	148	0	5	1	35	0	11	3	115	0	1	2	11	0	2	**75**
Kandy	181	1635	5	172	0	4	0	16	0	53	11	125	8	88	4	29	0	0	**80**
Matale	93	460	1	52	0	2	1	21	0	5	5	221	0	3	0	6	0	2	**100**
Nuwara Eliya	19	73	10	246	0	0	16	117	0	28	1	22	0	35	2	33	0	0	**100**
Galle	22	135	2	96	0	9	0	1	6	20	3	90	1	4	0	6	0	3	**100**
Hambantota	36	460	2	47	0	6	0	5	0	5	1	48	4	43	3	12	0	0	**100**
Matara	76	491	3	150	0	3	0	4	0	15	5	87	4	72	2	13	1	1	**100**
Jaffna	1	9	1	66	0	3	1	121	0	26	0	0	0	116	1	44	0	2	**25**
Kilinochchi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Mannar	0	4	3	35	0	1	9	69	0	4	0	0	0	0	1	32	0	1	**50**
Vavuniya	0	7	148	948	0	2	12	33	0	2	0	2	1	1	647	1910	0	0	**100**
Mullaitivu	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**0**
Batticaloa	18	334	2	153	0	10	1	7	0	41	0	7	0	1	0	5	0	1	**64**
Ampara	3	76	0	29	0	0	0	5	0	5	0	8	0	0	1	5	0	0	**57**
Trincomalee	7	233	1	52	0	2	0	3	0	0	3	14	0	10	1	7	0	1	**90**
Kurunegala	141	856	2	89	2	8	1	34	0	5	2	52	3	48	2	35	0	4	**84**
Puttalam	28	178	8	75	0	7	1	54	0	0	0	43	0	26	0	6	0	1	**89**
Anuradhapur	21	277	4	61	0	3	0	3	0	2	1	72	0	26	9	20	0	1	**79**
Polonnaruwa	5	52	1	19	0	2	0	13	0	6	0	40	0	0	4	10	0	0	**86**
Badulla	11	88	7	130	0	2	1	24	0	18	2	46	4	50	4	118	0	1	**93**
Monaragala	13	49	5	31	0	0	3	15	0	7	0	11	3	40	4	29	0	0	**100**
Ratnapura	94	562	4	301	0	15	1	34	1	5	5	79	3	22	21	30	0	1	**72**
Kegalle	122	1308	3	79	0	4	2	20	0	6	5	92	15	15	5	86	0	2	**55**
Kalmunai	2	108	0	60	0	1	0	6	0	1	0	2	2	2	0	8	0	0	**37**
SRI LANKA	**1300**	**10709**	**220**	**3209**	**02**	**109**	**52**	**755**	**09**	**312**	**72**	**1610**	**31**	**614**	**721**	**2537**	**2**	**29**	**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 12th May, 2009 Total number of reporting units =311. Number of reporting units data provided for the current week: 244
A = Cases reported during the current week. B = Cumulative cases for the year.

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