Accidents

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The various methods of improved sanitation, scientific approach to extermination of many dreadful and contagious or infectious disease and latest advance in medical science have definitely lowered the mortality and morbidity rates even in our developing country.

The World Health Organisation has defined "accident" as "an unpremeditated event resulting in recognizable injury" which has later been elaborated to "an event, independent of the will of man, caused by quickly acting extraneous force and manifesting itself by an injury to body or mind".

The various control Projects (T.B., and Leprosy) and Eradication Programmes (Malaria and Smallpox) in force in the country have already lowered the morbidity and some of these diseases have ceased to be the great threat that they used to be.

The regular and timely T.A.B.C. inoculation all over the country has gone a long way to reduce the number of enteric cases, and cases of Cholera. There were relatively few cases of cholera last summer.

From the view point of Health Organisers and Workers for better health, many threats still remain even in more advanced countries. Diseases like Cancer, Leukaemia, Coronary heart disease & mental illness, still cause great sufferings and loss of human lives. Chronic diseases like diabetes, arthritis, ulcers of the digestive system, and bronchitis are conditions which still cause economic loss by taxing human strength.

Accidents cause more injuries, deaths and disabilities in our country than any single disease. Although, it is not possible to specify the morbidity rates as no data is available, we can say with certainty that

human lives lost due to accidents are greater. The foregoing is true that accidents taken as a whole, (domestic accidents, and traffic accidents) cause more damage and suffering than any single endemic disease. The Department of Health will have to start to arrange to maintain correct vital statistics and health records. Epidemiological studies will need to be conducted by special committees and "accidents" as public health problem should be treated as a disease entity and proper preventive measures instituted according to needs. The studies of the extent of problem caused by accidents and their causative factors are important before actual prevention is tackled at the local or national level. Since it is our desire to prevent death, disabilities and suffering from our people, reducing the number of cases of accidental deaths and disabilities is as important as reducing the number of cases of diseases.

We have to consider two main categories of accidents viz. Domestic accidents and Road Traffic accidents.

Domestic Accidents:— We must bear in mind that most of the domestic hazards are man made and that the prevention also will have to be man-devised. The control and prevention of domestic accidents as public health problem has to be done at two levels, at the CENTRAL (NATIONAL) LEVEL—by introduction of laws and social policies and better organisation of health service; and at the LOCAL LEVEL—at the level of family (each household) by proper health education and training about good-risk taking or in connections with proper design. The customs and ways of living vary from caste to caste and also between people to people. Well planned social studies have to be undertaken in attempts to list out grave-risks in the various types of houses we live, and of the various social or religious customs.

We are now briefly enumerating the various domestic hazards which lead to accidents and possible ways and means of their prevention.

Burns and Scalds:— Are by far the most frequent accidents met in our homes, either in towns or in the villages. The unsafe methods of cooking, and fire for heating rooms cause damage to life and property. Sometimes a whole village in the Terai is burnt down to ashes due to these unsafe and careless methods. People of all ages and sex are involved but particularly burns and scalds injuries are more frequent in children and infants.

The manufacture and use of fire-works also lead to loss of life due to burns.

The dresses made from artificial silk and the terrylene clothes lead to burns because of their highly inflammable nature.

Most cases of burns and scalds in children and infants are attributed to carelessness of parents. It need not be stressed again that the most important way at prevention of burns and scalds is to educate each individual and the children about the dangers of burns and scalds. Children playing with match sticks, and carelessly thrown cigarette stubs are also among causes of fire. We in Nepal have to exercise proper and adequate caution because as yet we cannot hope to adopt approach similar to the more advanced countries because of the poor condition of the people. Prevention of children playing with match sticks, or with fire-works, staying away from fire if readily inflammable clothings are used are cautions which we can ourselves exercise.

Falls:- Falls leading to serious injuries and to fatal ends are also met with frequently in our country. The elderly and toddlers and children are the ones to meet with these accidents more often. The drunks and kite fliers also meet with this accident. Falling down the stairs are also frequent occurrences among the children and elderly. In villages many fatal falls are due to falls from trees, and the children succumb to falls into wells, pits and ditches and may be injured or drowned.

Houses under construction, or the types of stairs used are yet another source of injuries, fatal or serious, to the people in the towns or villages. The stairs made of small steps cut in one branch of a tree are also leading cause of falls in the villages.

It seems from the above that the most important way to prevent these would be to try good health education of people through Panchayats at various level by use of audiovisual media. As it will not be possible to change our mode of life suddenly or to change our poor and ill planned housing conditions because of economic reasons; good health education of the people and good training of the children in risk-taking etc. seem to be only means now at present to prevent such accidents.

Wounds;— Although fatalities are rare, sometimes injuries due to cutting or piercing instruments may lead to serious disabilities, e.g. loss of eye or ears, and be harmful to a family economically.

The threading needle, knitting needles, kitchen knives, and implements used for various house-hold work are not dangerous in the hands of skilled users, but the risk of injuring a child or an infant is always present; as more often than not our housewives or even ourselves leave such risky articles lying about which cause accidents. Loss of eyes or ears by accident due to piercing injuries are on records.

We in Nepal at present do not have to face as yet, the risk involved in the use of high-speed electric cutting instruments. Many protective mechanisms have already developed in these machines and instruments and when these are sold in the market we may be well trained to take risks and proper protection. The hazards caused by these various sharp-edged piercing and cutting instruments can be avoided totally if only those who know how to use or handle it are allowed to actually use it and store these things properly and in safe places where children cannot get at them.

Cut pieces of glass, broken glass panes, bottles, and mirrors lead to sometimes cut injuries. These risks are slowly receding with the introduction and large use of toughened safety glasses. We stress once again that proper education in risk-taking would be the only means to reduce the incidence of cuts and wounds due to broken glass so long our country is not much advanced and so long our economic condition does not allow us all to put in safety glasses.

Poisoning;—Poisoning is, perhaps, the most important cause of fatal home accident. It usually occurs due to taking overdose of some medicines or taking poisonous medicines by mistake, or accidental poisoning due to use of toxic agents as insecticides, or pesticides. The more frequent cases of fatality occurring from poisoning is in the group of children and adolescent. Unless absolutely careless or willful an adult cannot readily get accidental poisoning.

The use of drugs like barbiturate after taking alcohol; keeping such drugs on the table by the side of beds leading on to taking much more

than needed amount of the drug; and keeping such dangerous drugs in easily accessible open cup-boards where even children can readily reach and ingest these are causes which lead to frequent accidental poisoning.

Sometimes the use of bottles of non-poisonous soft-drinks for storing poisonous liquids have resulted in poisoning. The use of poisonous solutions for photography is also hazardous because, though rarely, it has resulted in poisoning.

The most important way to prevent accidental poisoning is to ensure that these poisonous substances are not readily available or accessible. They should be stored in cup-boards constructed at high places and utmost caution should be exercised in the use of such substances and only adults should handle these substances.

Gaseous poisoning have not yet become great risks to us yet but with rapid all round development of the country, we will meet this hazard in future when more frequent use of gas cooker or boiler becomes a common practice. Frequent inspection for leaks and damage to these equipments would seem necessary to check these accidents.

Suffocation:—More commonly infant and children are exposed to the risks of mechanical suffocation for while playing with thin bags an infant or child is liable to suffocate. Some plastic toys too—can cause choking and suffocation.

The importance of not allowing infants and children to handle these materials cannot be stressed with enough emphasis. The parents and grown-ups are responsible persons who can definitely prevent such accidents

Fire-arms and weapons:

Accidental injuries and deaths can occur while cleaning or servicing weapons and fire-arms. Usually grown-ups and skilled persons will not meet with such accidents, but the great attraction fire-arms and weapons have on adolescents and adults can no doubt lead to serious accidents. The prevention of accidents due to fire-arms and weapons can only be done through proper care in handling and proper storage.

Drowning: Accidental drowning can and has been one of the not infrequent causes of fatality in the villages where the numerous uncovered drinking or irrigation wells and ponds constitute grave-yards for the children and even adults. Many of our country men lose their lives while crossing flooding and inundated rivers.

Majority of deaths due to accidental drowning occurs in children and therefore they should be trained to understand the risks involved and also be given swimming lessons. The Panchayat should ensure proper covering of all wells and should see that edges of ponds and trenches or ditches are raised high or are fenced and all safety precautions taken.

Proper training in artificial respiration (mouth to mouth breathing) should be given through public health workers at Gram Panchayat level. The panchayat workers should be given good training in first-aid.

Snake and Insect bites: Accidental deaths due to poisonous snake or insect bites still occur in the villages and even towns in our country. While it is quite acceptable that no one gets these bites knowingly or carelessly, we do have cases of bites from poisonous snakes and insects.

Each health post or health centre or hospital should be stocked with drugs like lexin and other anti-venom drugs and serum and the staff in each of these health institutions should be perfectly trained to ligate or to use other surgical methods. The treatment of snake or insect bite poisoning by blood transfusion cannot be attempted in most of the health institutions because of the self apparent need of blood grouping and matching facilities and experts besides storing blood; but the use of anti-venom drugs should be taught even to Gram Panchayat workers besides the personnel in each type of health institutions and the multi-purpose health auxiliary workers.

Electrocution: Accidental deaths do occur due to electrocution but at least this one accident does not occur due to carelessness because most people are conscious about it.

Usually it is not thought that piped mains water forms more sure and efficient earth return for electric current. Keeping electric kettles where

they can be filled directly from water taps without first being disconnected may lead to serious electrical accidents.

The designs in our houses to be built in future should have proper consideration in non-conductive flooring. Fool-proof type of electric fitting which close automatically and contain an earth wire should be installed.

In our country where the use of electricity is now gaining ground in Kathmandu where 120 (A.C.) has been changed into 220 Volts every method available in prevention must be tried and assessed. Proper education of the people should be done by the electricity department by demonstrating effects of electric shocks on some of the many street dogs which the K.N.P. has not been able to eliminate from our streets!

There are other risks due to modern machines and aerosols which will take more time to reach us and so do not constitute immediate dangers. However the frequent collapse of old, ill constructed houses, particularly in the rainy season; allowing the children to play with coins and safety pins which they swallow; the drunks who get out of control and cause damage and danger; leaving of the inserted ignition key in parked automobile and so on, also do cause accidents that lead to injuries and deaths which can be prevented by exercising individual caution.

Road Traffic Accidents:- The suffering due to minor or serious injuries, as well as the economic loss due to disabilities are inestimable. Road Traffic Accidents are rightly regarded as the leading cause of death among human beings of the modern age. We wish to draw the attention of the police and other concerned authorities to the various factors involved and the irregularities that are commonly met with in traffic control and regulations so that they may take necessary action to prevent this tragic and largely unnecessary loss of human life.

The rapidly increasing number of motor vehicles, the narrow and sharp bends of our streets and the ill developed traffic sense in our people constitute the chief factors in frequent traffic accidents.

Indiscriminate issue of DRIVING LICENCES to persons who may know only just enough to propel vehicles in enclosed space, and who

may not have any driving experience at all in actual road conditions; and the utter and obvious lack of control over "Speeding" particularly by drivers of heavy vehicles (Trucks and Buses) and rash driving by taxi-drivers are factors equally important towards frequent traffic accidents. We know of many accidents in which drivers of cars and buses are solely responsible for the accidents.

The factors that cause traffic accidents can be considered in respect to roads, vehicles and road users of all categories.

The interaction between the design, construction, and surfacing of roads and road traffic accidents is reciprocal. The numerous bends in our roads, the narrowness of even famous streets, the irregular and skid-prone surface of most of our roads, poor visibility in most of the streets in our towns, entire lack or meagreness of traffic signals or warnings, and ill maintenance of roads are all strong contributing factors towards increasing frequency of accidents.

The next important factor is the vehicle itself: the proper maintenance of efficiency of vehicles—of the lighting system; of brakes, tyres and the exhaust are all important from the view point of safe driving. The third and equally important factor involved is the road user. Drivers of all types of vehicles, pedestrians and all those who use other types of motor-powered vehicles or ordinary transports (Push-bikes and cycle rickshaws, cattle-drawn carts, carriages, etc.) are equally important from the view point of accidents.

The prevention of traffic accidents can be therefore brought about accordingly as follows:—

The road—The present work of widening the roads and reducing blind hair-pin bends in Kathmandu is laudable and extremely timely. While these things are being undertaken, complete segregation of pedestrian traffic is also highly essential and should be enforced as far as possible. H.M.G. seem to have realised this urgent need as evidenced by the laying down of pavements in all new and newly made roads. If possible, separate lanes should be set apart on roads for cyclists and the like. All future road building should have curves and gradients for minimum safety.

Street lighting hitherto inadequate, should be made adequate not only along the main roads of Kathmandu, but in all places where traffic is expected to be heavy. We have noted with great relief that K.N.P. has already started to plan to have adequate street lighting in Kathmandu.

While Kathmandu police authorities have recently enforced "NO SMOKING WHILE DRIVING" rule, it is a matter of regret that they have not so far thought of exerting their authority for the prevention of many more dangerous and serious practices e.g. straying of multitudes of cattle and dogs on all our roads, anywhere and everywhere, which are not infrequently involved in ensuing serious accidents, and which result in great loss of human life as well as damage to the vehicle and property of driving while drunk from the intake of intoxicants, etc. To us, it seems that the authorities exert the full force of the rules only on those who desire to respect the laws, but cannot enforce them on those who are recalcitrant, or simply do not care. One of the most important ways to reduce the number of accidents, fatal or otherwise, is immediately to declare all stray cattle and dogs illegal, to impose a monetary penalty or fine on those owners who let their cattle or dogs stray in the streets. The police should also check on the soberness of all drivers of vehicles, for drunken driving is a common feature of Nepalese driving today, and is another major cause of accidents.

The vehicle—The police do have the obligation to perform some sort of an annual check on the road worthiness of vehicles. But taxis seem to be subjected only to a cursory scrutiny, whereas private vehicles are perhaps excused even that.

Traffic control authorities should subject every vehicle to a thorough check-up with the help of competent mechanics who may be specially recruited for this purpose. Such inspections should be done periodically, and at least once in six months, if not earlier. The police should not allow any vehicle to ply on the road if the report on its road worthiness does not show the minimum required standard, and charts may be introduced by the police in consultation with expert mechanics as to the standard to be maintained by each vehicle owner in respect of the road-worthiness of his vehicle. Whatever they do and decide the police should strictly implement their ruling on one and all.

The experience of drivers has been that in the recent months the Traffic Police have suddenly changed their technique of directing vehicular traffic with various new and complicated systems of signalling and this may itself lead to serious accidents because vehicles coming from various direction are either stranded or try often to force their way because of the drivers' obvious lack of complete understanding of the ever changing traffic direction methods. Foreign drivers particularly find all this very difficult to understand, as well as irksome, and we have heard them express their feelings forcefully against such changes.

Road Users: The most important and effective scope for PREVENTION of road accident lies with the road users. Not one single measure however good, can be effective by itself. There are various matters of which road users should have full knowledge. Road users can be drivers themselves, the people who walk on the road, and those who use other types of motor or non-motor powered transport.

Education in the safe use of roads should start in the schools. Children, in schools or in our homes, should be trained how to act and behave as pedestrians or as cyclists, and the necessity for such training should also be explained to them. The people, adults and children both, should be taught safety techniques by means of radio, movies, slide shows, special talks and the press. Public Health Authorities are the proper people to organise effective public health education in road safety. The police share this responsibility equally with health authorities, and have to be active in promulgating and implementing road safety precautions. There should be frequent and regular "demonstrations" on traffic safety by the police at "risky points" in respect of street crossing etc.

The issue of driving LICENCE to all those who apply, after only cursory and hurried "TRIALS" is by far the most dangerous practice, and causes the largest number of traffic accidents. The police should introduce a system of continued supervision of "new drivers" who may also be required to put up "L" plates on their vehicles to indicate "Learner", so that other road users may be warned to exercise necessary caution.

The authorities may also start training centres to explain and train drivers in safe methods of driving.

Many accidents are the result of driving by persons who are "Learning" and who do not possess authorised driving licence. One such accident took place in Maharajgunj some time back where two persons received serious injuries, one of which resulted in death. The police have taken strict action against those concerned. It is absolutely necessary to hold sudden unscheduled checking of the licence of drivers at various points at frequent intervals.

The next point which requires full attention from the authorities and necessitates prompt and stern action is "Speeding" or rash driving by "road hogs". So far, the authorities do not seem to have formed any ideas about "speed limits" whether within the city limits or in rural areas. Though the speed limits for different types of vehicles are mentioned in licence books, an actual enforcement has never been attempted. The police should not allow more than 10 m.p.h. in Juddha Road as the whole road is over-crowded—most of the time in the day and evening. It is the city's main shopping centre and men, women and children walk in large numbers on the road itself because the pavements are too small to accommodate all who walk.

The unnecessary great loss of life in Tribhuban Rajpath due to traffic accidents is attributed mainly to rash or careless driving or speeding of heavy vehicles, and specially by drivers who may in addition be drunk. Uncontrolled and unchecked driving in the Tribhuban Rajpath for years has resulted in great loss of life and we hear of frequent accidents on that road. The possible main reason we think, is that the traffic police force is either non-existent on the high-way, or is totally inadequate to cope with the situation. When one has to travel by road from Kathmandu to places outside, one is subjected to many police scrutinies in the numerous "Check-posts" While these diligent guardians of the law are only performing the duty assigned to them, one must say that it is nothing but a nuisance and harassment if one is made to stop at so many places just to have the number of one's vehicle noted by the policeman who in addition, asks one to affix one's signature on a torn dogs-eared and dirty exercise book. This formality once completed the driver is actually free to drive his vehicle 100 miles an hour or more if he likes, or is in a hurry. It seems logical therefore to suggest that the police force organise

“police-patrol” on all roads, rather than have these obviously not very useful checkposts from the view of road traffic accidents, and ‘book’ careless drivers who exceed speed limits and also those who may be under the influence of drinks. This presupposes, of course, that these checkers should at least be literate, and should not hold licence books upside down, while checking them, in front of the waiting driver of the vehicle who might, as likely as not, be an astonished foreigner. The immediate replacement of superfluous check-posts by proper police patrols on T.R.P. and Trisuli Road, and on all high-ways all over Nepal will definitely reduce the number of accidents and will cause less harassment to law abiding drivers. The police may attend to these requirements more than to “No smoking while driving” etc. rules, for all those who use vehicles have seen that all modern vehicles of all types are fitted with cigarette lighters and ash-trays. It need not therefore be emphasised that even the most modern countries which produce vehicles do not think “smoking while driving” to be a cause of accidents.

Road users-Pedestrians in all parts of the country seem utterly to discard safety precautions. Pedestrians find it irksome to walk along the pavements in Juddha Road in Kathmandu and other towns where pavement exist, and cause unnecessary difficulties to the numerous drivers, and also cause a number of otherwise avoidable accidents. While nothing much can be done to change the condition of permanent roads of the type we have, the people who walk on the roads or the people who use other means of transport, can change their careless habits and train themselves to be more cautious. Accidents are entirely beyond the control of vehicle drivers when a child or even an adult suddenly jumps on the street or runs from blind alleys or simply jay-walks on the road, or suddenly runs across the road carelessly, to be hit by a passing vehicle in spite of all twists and turns by the frantic driver.

In Nepal, so far as our experience goes, all vehicle accidents are attributed and chalked against the poor driver, whether such really be the case or not and severe punishments meted out to him. If a man or a cow or a bull is killed, it becomes a homicidal offence (man-slaughter) as cows and bulls are regarded as human beings according to our laws. These rules seem to have been framed in an onrush of

sentiment about sacred animals and their farmers seem to have forgotten that we find cows and bulls and other animals e. g. dogs, goats, buffalos, chicken, etc. in large numbers straying all over the roads and some of them may be hit even when the greatest caution is applied; or neatest efforts made in trying to save them, and this may result in a serious accident and loss of more useful human life. The police always seem to attribute all accidents to drivers. The poor drivers not only lose their licence which is their only means of livelihood, but also, in addition, may have to pay fines ranging from Rs. 3000 to 5000, a sum entirely beyond their ability to pay.

Since we are importing a large number of vehicles of all types and since our old roads, no matter how hard the authorities try to improve them, will retain many of their present character, we have ourselves, both authorities and people, to take immediate steps to avoid unnecessary loss of more lives. Therefore the most important steps in this respect would be to introduce strict "Trial" rules prior to the issue of driving licences, compulsory exhibition of "Learner driver cards", strict implementation of rules against "Speeding" or drunken driving, driving without licence, replacement of superfluous check posts by police patrols on highways, frequent surprise checking of driving licences, regular checking up of road worthiness of vehicles etc. which clearly lie within the jurisdiction of the traffic police. The drivers will have to try to devote their whole hearted attention on safe driving e.g. changing gears slowing down to minimum speed in built-up areas and the crowded road, exercising absolute caution, looking out for children and village folk who suddenly appear in front of their vehicles etc. The blinking of head lights while taking turns, dipping of head light while crossing another vehicle at night, allowing heavy vehicles to pass first, parking at proper places, etc. constitute road courtesy which pays great dividends not only in more consideration for other road users, but also in lessening the number of accidents.

Rules need to be introduced to penalise straying cattle on the roads, and they will have to be implemented strictly. Such cattle may be impounded and fines levied from the owners or in the alternative, they may be auctioned and sold off. Similar action may be taken about other

animals. Schools and colleges should start teaching students road safety measures and public health authorities and the police should hold demonstration at "training centres", "safety-weeks", road courtesy drills, etc., which will educate the public in the proper use of roads which may be aptly designated the arteries of the body politic.

The conclusion is that most of the accidents that can be caused in and round home and on roads are preventable. It is suggested that data on all types of accidents should be collected from urban and rural areas. Then public health education in proper control and prevention of accidents should be arranged through audio-visual aids, slide shows, movies, lectures and talks and to make each individual conscious. The Panchayat at various levels (Gram, Nagar, Zilla, Anchal and Rastriya) should start country wide public health educational campaigns on proper risk-taking and safe driving and should see that the rules and regulations in force are strictly followed by each individual.

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