Saving kids from accidents

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children

ACCIDENTS and resultant injuries pose a major worldwide threat to kids and are one of the most common cause of death among them. Even though not all accidents result in death, there may be severe consequences like scarring, disfigurement and persistent neurological deficits which can result in their inability to perform daily activities.

Accidents among children vary from age to age, and depend upon their gender and socio-economic and psychological environments. Boys have a higher rate of accidental injury at all ages than girls. This is not because of the difference in their motor skills, muscle strength, ways of coordination and development, but rather due to the greater risk-taking behaviour among boys. Supervising more than one child increases injury risk due to the inability of parents to keep an eye on each of their children. Therefore, children of large families are more accident-prone.

Then, those living in heavily populated areas suffer more road accidents than their rural counterparts. Psychological factors also play an important role: those living with a step parent have been found to suffer more accidents in the first five years of life than those living with natural parents. Similarly, children of mothers who are psychologically disturbed have an accident rate nearly four times higher than other children. This is because of the emotional vulnerability among such kids.

Accident rates are directly related to poverty. Poor children frequently develop psychosomatic symptoms. They usually have teenage parents, belong to large families, violent neighbourhoods, live in heavily populated areas with roads as major through fares, have fever safe places to play, tend to go out as pedestrians more often — all factors that contribute to increased number of accidents. Mortality rates from fires, motor vehicle crashes and drowning are also two- to four-fold high among the poor.

Age relation: Infants (0-1 year) can fall from adult beds even before they can roll over. In toddlers (1-2 yrs) ingestion occurs frequently, and falls, burns and drowning are common. In pre-schoolers (2-5 yrs) running, climbing and jumping are the mainstays of activity. They can ride tricycles and can interact with each other but their thinking remains illogical, therefore injury to themselves or others may not prevent similar episodes from happening in future. During school age (5-10 yrs) bicycle injures and pedestrian accidents are most common. During pre-teen and early teen years (10-14 yrs) sports and firearms related accidents occur. During adolescence (more than 14 yrs) sports and work related injuries are common.

Children with immature or deficient motor skills or those with advanced motor skills, who attempt things that most children would not dare, are both at great risk of facing an accident.

Driving, traffic accidents: The frequency of driving before obtaining a learner's permit and the level of risk-taking are significantly associated with a motor vehicle crash in the first year of driving.

Unrestrained child occupants and those riding in the back of pickup trucks are a population at danger because of the risk of ejection which can cause serious head injury. The risk of pedestrian injury depends on factors like high traffic flow, complex roadway systems, greater population density and addiction. According to a case study, identification of an approaching vehicle is the most difficult task for a 5-year-old child.

Drowning: Drowning ranks second only to motor vehicle injury as a cause of traumatic death among kids. The reasons being inadequate supervision and parents' overestimation of their child's abilities. Bucket drowning is also quite common.

Reliable predictors in near-drowning cases include water temperature, time of submersion, degree of pulmonary damage and effectiveness of early resuscitation efforts. Near-drowning can have long-term consequences, from permanent disability to serious health problems.

Fires and burns: Fire and burn related accidents are the third most common cause of accidental deaths among children. Scald burns account for the largest number of total injuries and are most prevalent in children under four years of age. Flame burns usually accompanied by smoke inhalation also accounts for injuries and most deaths.

Even a brief contact with high voltage source results in electrical burns. Electrical cords are a common source of these accidents. Chemical burns in children are often related to ingestion of caustic agent. Burns injuries from contact with hot surfaces are most common. The sources include hot appliances.

Most thermal injuries do not result in death, but for seriously injured children recovery may be long and difficult. They may also have to live with scars and disfigurement that could last a lifetime.

Falls and collisions: Falls are the most common cause of injury in the home. Although a much greater cause of morbidity than mortality, falls are still one of the leading cause of accidental death among children. The peak incidence of falls occur among the toddlers and adolescents.

Striking and collision with a person or an object is a common type of accidental home injury. Baby-walker injuries can be very serious and can include concussion, fracture skull, intracranial haemorrhages, broken limb, other fracture contusion, abrasions, broken teeth etc.

Foreign bodies: The natural curiosity of children coupled with toddlers' tendency to put every thing in the mouth make foreign body aspiration a frequent occurrence in paediatric population. The highest incidence is noted in children 6-36 months old and is one of the most common cause of accidental death in children younger than one year of age. Other injuries in the home include cutting, piercing, crushing, punching, suffocation choking etc.

Poisoning: There are two peak ages for poisoning: 1-5 years and adolescence. In children it occurs when they eat or drink medicines, household cleaners, chemicals and gardening substances. Poisoning in older children and adolescents usually represent manipulative behaviour, chemical or drug abuse or suicide.

Injury control: Because of the hazardous consequence of an accident, prevention should be the ultimate goal of a physician. Reduction in morbidity and mortality from injuries can be accomplished not only through primary prevention but also through secondary and tertiary prevention, i.e. appropriate emergency medical services for injured children, post-traumatic care for the multiple injured, severely burnt or head-injured child, and specialized paediatric rehabilitation services that attempt to return children to their prior level of functioning.

Product modification: Efforts to control injuries include education or persuasion, changes in products and modification of the environment, be it social or physical.

Efforts to persuade individuals, particularly parents to change their behaviour, have constituted a great part of injury control efforts. The most successful injury prevention strategies are generally those that involve changes in product design. Buying cars equipped with air bags and using child resistant caps on medicines and household products are examples of effective product modification.

The use of smoke detectors and safe roadway designs have great potential for reducing injuries. Also included in this concept are changes in the environment through legislation such as mandatory child seat. Campaigns combining two or more of these approaches have been particularly effective in reducing injuries.

Children under nine years should not be expected to walk anywhere by themselves. Supervision of small children should be increased, specially in congested areas. Children under 10 years of age should not ride bicycles on roads without adult supervision. A tightly fasten helmet will protect against serious and life threatening head injuries. All children should be supervise closely while swimming. Smoke detectors can prevent 85-90 per cent of the house fire related deaths. A child should never be held by an adult having a hot drink. Extension cords should be unplugged from wall sockets after use. Infants should not have access to coins, but tons and toys meant for older chil dren. Nuts, hard beans, gumballs et should not be given to young childre A campaign against baby-walk should be brought forth and pare should be counselled about the h ards of baby-walkers. Child saf designs should be present in the m while building a home. Eliminatio fire arms from the environmen children and adolescent is the ne sary key to reduction in firea fatalities and injuries. Chemi should not be stored in a drink bo Drug containers should be kept side the reach of children.

With numerous advances in management of accidents among dren, prevention, pre-hospitaliza and intra-hospital care, post-opera management and rehabilitation, cl hood mortality has dropped by 45 cent over the last 20 yea Nonetheless, trauma is still the le ing cause of childhood deaths, so c tinued commitment by paediatrici and healthcare providers has a lo way to go. ■

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