per cent of the injury fatalities but the share of life years lost amounts to 35 per cent, losing on average 32 years of life per fatality. For unintentional injuries, road traffic accidents historically have been the leading cause for loss of life years but since 2008 poisonings cause the highest loss. In 2014, also falls caused a higher number of life years lost than did road traffic accidents.

There are large differences in the average number of life years lost in different injury types. While the average fall fatality in 2014 caused a loss of 9 years, road traffic fatalities lost on average 32 years of life and poisoning fatalities on average 40 years.

Conclusions Using potential years of life lost due to injuries as a complement to the number of deaths will change the picture of which types of accidents place the heaviest burden on society, allowing a more nuanced description of the burden of injury fatalities.

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112 COST OF CHILD AND ADOLESCENT INJURY IN THE UNITED STATES: BY AGE GROUP, CAUSE, AND PAYER

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Background In 2012 in the United States, 13,454 children and adolescents died due to injury and another 9 million visited the emergency department or were hospitalised. However, incidence tells only part of the story. Costs are a better measure of burden by accounting for multiple injury consequences – death, severity, disability – in a single unit of measurement.

Methods We apply an established injury cost model to the Healthcare Cost and Utilisation Program (HCUP) sample-based emergency department and inpatient datasets and the U.S. Multiple Cause of Death file. In addition to medical and work loss costs, we take a societal perspective by including the estimated cost of quality of life and pain and suffering.

Results Injuries (fatal, hospitalised and ED-treated) to 0 through 19 year-olds in 2012 resulted in an estimated $92 billion in medical and work loss costs and an additional $502 billion in quality of life losses. Nonfatal injuries account for the majority (83%) of these costs. Adolescents (ages 15–19) account for 29% of the injuries but 37% of the costs. Falls and struck by/against injuries contribute to 51% of nonfatal injury costs and are the leading causes in all age groups. Assault-related injuries rank 5th, 9th, and 4th among 0–4, 10–14, and 15–19 year-olds, respectively. Self-harm ranks 9th among 15–19 year-olds. Government costs are high with Medicaid paying for 43% of medical costs. Proportion paid by Medicaid is higher among 0–4 year-olds (54%) and among assault (60%), and unintentional firearm (62%), bite and sting (56%), and hot object/substance (55%) injuries. The most severe and debilitating injuries will result in higher costs. Among nonfatal injuries, near-drownings are the most costly. Traffic-related injuries are also among the most severe with pedestrian, motorcycle, and pedalcyclist injuries ranked #2, #4, and #5 in mean injury cost.

Conclusions Cost data support priority-setting and intervention selection. Effectively addressing falls, struck by/against injuries, and assaults will reduce the burden of injury in the United States.

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113 ROAD TRAFFIC INJURY COST ESTIMATION BY WILLINGNESS TO PAY METHOD

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Background There are different methods for injury cost calculation. This study is the first ever one using the willingness (WTP) to pay method a middle-income country such as Iran in 2013 to calculate the cost of road traffic injuries (RTIs).

Methods In a Cost Analysis Method study on costs resulting from RTIs, 846 people per road user were randomly selected and investigated. The research questionnaire was prepared based on the standard for WTP method; Contingent value (CV), stated preference (SP), revealed preference (RP) model considering perceived risks. The collected data were analysed after their strict control. Final analysis of WTP was carried out using Weibull model and Bayesian method.

Results Mean age of the subjects was 33.4 ± 9.9 years old. Mean WTP was 87 $ among these road users. Statistical value of life for one death and one injury cases were estimated 19,713,584,906 IRR and 2,412,582,500 IRR respectively. In sum, 20408 death and 318,802 injury cases amounted to 1,171,450,232,238,648 IRR equivalents to 39,048,341,074 $. Moreover in 2013, costs of RTIs constituted 6.46% of gross national income, which was 604,300,000,000 $. Findings obtained from Weibull model and Bayesian model showed that WTP had a significant relationship with age, gender, education, monthly income.

Conclusions Costs of traffic injuries were much higher than the global statistics. If policy making and resource allocation are made based on the scientific pieces of evidence, an enormous amount of capital can be saved through reducing death and injury rates. This method seems to be more precise method to traffic injury cost estimation than human capital method.

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114 PREVALENCE OF DISABILITY IN A DISTRICT OF BANGLADESH

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Background Data on disability among Bangladeshi people are suboptimal, extremely variable, methodologically inconsistent, and not precisely known. Therefore, we conducted a comprehensive survey on disability to determine prevalence and distribution of cause specific disability among residents of a district in Bangladesh.

Methods The survey was conducted in Manikganj, a typical district in Bangladesh, in 2009. Data were collected from 37,030 individuals of all ages. Samples were drawn out of 8,905 households from urban and rural areas proportionate to population size. Three sets of interviewer administered questionnaires were used separately for 0–1 years, 2–10 years, and 11 years and above age groups to collect data. For the age groups 0–1 years

and 2–10 years, the parents or the head of household were interviewed to obtain the responses. Impairments, activity limitations and restriction of participation were considered in defining disability which is consistent with the International Classification of Functioning, Disability and Health framework.

Results The overall age standardised prevalence of disability per 1000 was 46.5 (95% confidence interval, 44.4–48.6). The prevalence was significantly high among the respondents living in rural areas at 50.2 (47.7–52.7), compared to urban areas at 31.0 (27.0–35.0). Overall, females had more disability 50.0 (46.9–53.1) than males 43.4 (40.5–46.3). Educational deprivation was closely linked to higher prevalence of disability. Commonly reported prevalence (per 1000) of cause specific disability was illness (20.2) followed by congenital (9.4) and injury (6.8) and these were consistent in males and females.

Conclusions Disability is a common problem in this typical district of Bangladesh, which is largely generalizable. Interventions at community level with special attention to the socio-economically deprived group are warranted.

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115 UNDERSTANDING TRAJECTORIES OF MENTAL DISTRESS AFTER MODERATE OR SEVERE INJURY AMONG ADULTS IN KENYA

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Background Injuries present a major burden to populations in developing countries. Despite major psychological distress have been found among injury survivors in developed settings, there has been a lack of literature on the mental health consequences among all types of injury in developing countries, especially in sub-Saharan Africa.

Methods The Health, Economic and Long-term Social Impact of Injuries (HEALS) Study is a multi-country prospective longitudinal study currently underway. In Kenya, the study includes adult patients age 18 years or above who are hospitalised due to injury for at least one day in Kenyatta National Hospital. Eligible patients are being enrolled in the study until the sample size of 1000 patients is reached. Patients are interviewed in-person while in hospital, and followed up at 1, 2, and 4 months after hospital discharge through phone interviews. Distress symptoms severity is assessed using Hopkins Symptoms Checklist (HSCL-25) at baseline and follow-ups, and post-traumatic stress disorder symptoms are assessed at follow-up interviews using PTSD Checklist for DSM-5 (PCL-5).

Results 320 patients have enrolled in the study and completed baseline interview, 246 patients completed first follow-up interview, and 119 respondents completed second follow-up interview. Preliminary total score of HSCL-25 is 1.18 (SD: 0.17) at baseline, 1.15 (SD: 0.18) at first follow-up, and 1.10 (SD: 0.14) at second follow-up interview. Exploratory factor analysis will be conducted to determine the underlying factor of distress. Latent growth mixture modelling will be to determine the latent construct of mental distress. Risk factors such as sex, age, type of injury, severity of injury, and previous exposure to traumatic experience will be assessed.

Conclusions Mental distress continues months after hospitalisation among some injury patients. This highlights the importance of screening and attending to the mental health of patients in recovery from their injury.

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116 FUNCTION, HEALTH RELATED QUALITY OF LIFE AND COST AFTER INJURY IN A CITY OF NORTH INDIA: A MULTI SITE COHORT STUDY

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Background The burden of traumatic injury in India is high, but remains ill-defined and poorly quantified. The aim of this project was to measure the impact of traumatic injuries on functioning and health-related quality-of-life (HRQoL), economic impactand to identify predictors of poor outcomes post-injury.

Methods A prospective observational study was conducted at three hospital sites in Chandigarh, North India in 2014–2015 for all ages admitted with an injury. Consent was sought and participants were followed at 1, 2, 4 and 12 months after injury; face to face or telephonic interviews collected data on socio-demographics, circumstances of injury, cost associated with injury, disability, function and health related quality of life. Interim analysis for 4 months is reported below, with 12 months interviews underway.

Results 2950 (90% of eligible) participants were recruited, with a follow-up rate of 74% (2180) at 4 months. Road traffic injuries (1622/55%) followed by falls (914/31%) and burns (383/13%) were the leading cause of injury; 86% were males, 79.5% were in paid employment at the time of injury. The average out of pocket expenditure per hospitalisation and up to 4 months post discharge was USD 388 (95% CI: 332–441) and USD 946 (95% CI: 771–1021) respectively. The prevalence of catastrophic expenditure was 30% (95% CI: 26.95–31.05), which was significantly associated with lower income quartile (OR 23.3 [95% CI: 5.7–73.9]; p < 0·01), inpatient stay greater than 7 days (OR 8.8 [95% CI: 3.8–20.6]; p < 0.01), major surgery (OR 4.9 [95% CI: 2.7–8.4]; p < 0.01), and occupation as wage labourers (OR 8.1 [95% CI: 1.6–24.6]; p = 0.01).

Conclusions Injury has a substantial impact with a high proportion of patients sustaining catastrophic health expenditure, particularly the poor. Measures aimed at increasing public health spending for sustained prevention programs and providing financial risk protection to those injured deserve urgent priority in India.

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117 LONG-TERM HEALTH, ECONOMIC, AND SOCIAL IMPACT OF INJURY IN FOUR LOW- AND MIDDLE-INCOME COUNTRIES

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Background With 90% of the burden of injuries concentrated in low- and middle-income countries (LMICs), the impact on individuals, families, and society, especially in the case of non-fatal injuries, is exacerbated by the absence of insurance or social support mechanisms. There is a dearth of information in the literature on the occurrence of non-fatal injuries, and their long-term consequences. This study aims to understand the health (disability), social and economic impact of injuries in LMICs.