England between 2010 and 2013. Participants comprised 567 children presenting with unintentional poisoning occurring at home, and 2320 control participants matched on age, sex, date of event and study centre. Parents/caregivers provided data on safety practices, safety equipment use, home hazards and potential confounders, by means of self-completion questionnaires. Data were analysed using conditional logistic regression.

Results Compared with controls, parents of poisoned children were significantly more likely not to store medicines out of reach (adjusted odds ratio (AOR) 1.59; 95% CI: 1.21, 2.09; population attributable fraction (PAF) 15%), not to store medicines safely (locked or out of reach (AOR 1.83; 95% CI: 1.38, 2.42; PAF 16%) and not to have put all medicines (AOR 2.11; 95% CI: 1.54, 2.90; PAF 20%) or household products (AOR 1.79, 95% CI: 1.29, 2.48; PAF 11%) away immediately after use.

Conclusions Not storing medicines out of reach or locked away and not putting medicines and household products away immediately after use increased the odds of secondary care attended poisonings in 0–4 year olds. If associations are causal, implementing each of these poison prevention practices could prevent between 11% and 20% of poisonings.

401 MATERNAL POSTPARTUM DEPRESSION IS ASSOCIATED WITH INCREASED RISK OF EARLY CHILDHOOD INJURY

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10.1136/injuryprev-2016-042156.401

Background Previous research indicates an association between maternal postpartum depression (PPD) and child maltreatment, but research on this association in child injury outside of the maltreatment context is limited. The Nurse-Family Partnership (NFP) is a nurse home visiting program in which nurses visit first-time, low-income moms from pregnancy until the child's second birthday, promoting healthy parenting practices. As early childhood injury or ingestion emergency room (ER) visits are primary NFP outcomes, there is an interest in determining risk factors for these outcomes within the client population.

Methods We analysed a cohort of NFP clients beginning the program between 7/1/2010 and 6/30/2012 with completed 12-month infant health care and PPD forms (n = 6271). Postpartum depression was measured using the Edinburgh Postnatal Depression Scale (EPDS) administered 1 to 8 weeks after birth, with a cutoff score of $\geq$10 indicating possible PPD. The outcome was defined as self-reported infant ER visit due to injury or ingestion on the 6- or 12-month infant health care form. Logistic regression was used to calculate adjusted odds ratios of the relationship between PPD and injury.

Results A total of 985 clients (15.8%) exceeded the possible PPD cutoff on the EPDS. Injury- or ingestion-related ER visits in the child's first year of life were reported by 385 clients (6.2%). Postpartum depression scores above the cutoff were significantly associated with ER visits after adjusting for child gender and maternal race, age, education and marital status (adjusted OR: 1.41 [1.07, 1.84], p = 0.01).

Conclusions We found a significant association between PPD and subsequent risk of childhood injury/ingestion ER visit within a cohort of NFP clients after adjusting for related confounders. Understanding how postpartum depression affects early childhood outcomes may provide opportunities for targeted injury prevention interventions within the home visitation program context.

402 CHILD INJURIES IN CROATIA – SIGNIFICANT PUBLIC HEALTH ISSUE

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10.1136/injuryprev-2016-042156.402

Background Injuries are the leading cause of death among children in Croatia. In recent decades, the work on monitoring and prevention of injuries has intensified, which led to a reduction of child mortality caused by injuries.

Methods The data used in the research was collected from the routine mortality and morbidity statistics, the database of the World Health Organisation: European Detailed Mortality Database (DMDB), as well as from the results of the international project TACTICS (Tools to Address Childhood Trauma, Injury and Children's Safety).

Results In Croatia, in the last ten-year period from 2005 to 2014 has been noted a trend of reducing the mortality rates from total number of injuries (V01-Y98) among children aged 0–19. The highest age-specific death rate from injuries in children in the mentioned period was 14.6/100.000 (2005), and the lowest 7.1/100.000 (2014), which represents almost double reduction in mortality. The reason for this is primarily the trend of reducing the mortality rate due to traffic accidents (V01-V99) in children (8.6/100.000 (2005); 2.6/100.000 (2014)). The leading external causes of death from injury in the observed period were: traffic accidents, suicide, drowning, followed by poisoning and suffocation. According to the European DMDB database, Croatia has been positioned around the middle of the European scale with the standardised mortality rate from injury (0–19 years) 8.8/100 000 (2012). According to the research carried out in the framework of the international project TACTICS, it was noted that Croatia has a medium satisfactory child safety level in the area of unintentional child injury prevention. In the violence prevention area Croatia belongs to the European countries with progressive politics.

Conclusions Although in the last few decades Croatia perceives a trend of reducing mortality from child injuries, further efforts in the area of monitoring, treatment and prevention of child injuries are needed.

403 CHILD PEDESTRIAN COLLISIONS, WALKING TO SCHOOL AND THE BUILT ENVRIONMENT: A CASE CONTROL STUDY

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10.1136/injuryprev-2016-042156.403

Background Walking to school is a way to increase daily physical activity; however the risk of injury must also be considered so that walking does not lead to an increase in pedestrian injuries. Risk factors associated with the environment around schools with high child pedestrian motor vehicle collision (PMVC) rates were examined.

Methods Child PMVCs from 2000–2013, ages 4–12 years, were mapped within elementary school attendance boundaries in

Toronto, Canada. Case and control schools were defined as those with the highest and lowest quartile of PMVC rates, calculated using census data. Potential risk factors included built and non-built environment variables obtained from municipal data sources as well as via direct observational counts done in the spring, 2015, to measure the proportion of children walking to school. Logistic regression was used to compare case versus control schools stratified by geographic location (downtown vs inner suburbs).

Results The mean PMVC rate in case schools (n = 50) was 13.4/10,000/year and in controls (n = 50) was 1.75/10,000/year. Walking was not associated with high PMVC rates after adjustment for the built environment and school social disadvantage. Overall, lower residential (OR 0.56, 95% CI: 0.37, 0.86) and higher one-way street densities (OR 4.00, 95% CI: 1.76, 9.08), school crossing guards (OR 3.65, 95% CI: 1.10, 12.20) and higher social disadvantage (OR 1.37, 95% CI: 1.11, 1.70) were associated with high PMVC schools, Similar associations of high PMVC schools with built environment features were found in the inner suburbs; however, there was a stronger association with school social disadvantage downtown.

Conclusions Walking to school was unrelated to high PMVC rates after controlling for the built environment. The built environment and school disadvantage were associated with higher PMVC rates with possible differences by geographic location.

404 A SYSTEMATIC REVIEW AND META-ANALYSIS OF SCHOOL BASED PROGRAMMES TO PREVENT CHILDHOOD INJURIES

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10.1136/injuryprev-2016-042156.404

Background The aim of this Cochrane systematic review was to evaluate the effectiveness and cost-effectiveness of school-based education programmes to prevent unintentional injuries in children and young people.

Methods A total of 28 electronic databases and websites were searched. We included randomised and non-randomised controlled trials and controlled before-and-after studies of primary and secondary prevention interventions, delivered in the school setting, aimed at a range of injury mechanisms. The primary outcome was self-reported or medically-attended unintentional (or unspecified) injuries and secondary outcomes were observed safety skills, observed behaviour, self-reported behaviour and safety practices, safety knowledge and health economic outcomes.

Results 27 studies reported in 29 articles were included. Interventions comprised information giving, peer education or were multi-component. 7 studies reported the primary outcome of injury occurrence and only 3 of these were similar enough to combine in a meta-analysis with a pooled incidence rate ratio of 0.76 (95% CI: 0.49, 1.17) and significant heterogeneity between effect sizes ($Chi^2 = 10.38$, df = 2, P = 0.006; $I^2 = 81\%$). Safety skills reported in 2 studies showed significant improvement, as did all 4 studies reporting observed safety behaviours and 13 out of 19 studies describing self-reported behaviour. The 21 studies measuring changes in safety knowledge were varied in their focus, including water, burn, sport, brain and spinal cord, agricultural or mixed injury prevention programmes and most reported that safety knowledge improved. Only one study reported intervention costs but did not undertake a full economic evaluation.

Conclusions There is good evidence that school-based injury prevention programmes improve safety skills, behaviour and knowledge. We found insufficient economic studies to assess cost-effectiveness.

405 PREVENTING HOME INJURIES AMONG CHILDREN IN MALAYSIA: A CLUSTER RANDOMISED CONTROLLED TRIAL

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10.1136/injuryprev-2016-042156.405

Background Child injury at home has become a growing concern in developing countries. This project aims to evaluate the effectiveness of two intervention strategies—home-based safety tutorial program and educational pamphlet—to reduce in-home hazards for unintentional child injuries within the home in Malaysia.

Methods We conducted a prospective cluster randomised controlled trial in Hulu Langat district, Malaysia. We randomised 59 clusters to two study arms (30 for tutorial and 29 for pamphlet) with 30 households per cluster. On an initial household visit, a baseline home safety hazard assessment was conducted, followed by the intervention and two follow-up visits at 2 and 4 months. The outcome measures are in-home hazards for child injuries, and incidence of child home injuries.

Results The study enrolled 1170 households, with 13324 children 1–5 years of age. Overall, almost 40% (5061) of children experienced an injury at home in the 3 months preceding our initial visit. The three most common types of injuries reported were falls (86.2%), poisoning (2.9%), and animal bites (2.1%). The most common types of safety hazards for such injuries observed were having pedestal fan within reach of children in living/sleeping area (tutorial: 45% vs. pamphlet: 46%, p = 0.13), presence of open buckets of water (45% vs. 44%), and having lock of the bathroom door within reach of children (41% vs. 45%). Adjusting for socio-demographic factors at household level and caregiver characteristics, estimates of a generalised linear model fit showed that presence of open buckets of water significantly predicts child injuries (OR = 1.8, 95% CI: 1.4–2.4).

Conclusions The study improves understanding of the burden of household injuries among children in a Malaysian district, and findings can guide intervention strategies for addressing home injuries among children. Materials and interventions developed in this study can be adapted to other settings.