Background There is a paucity of literature investigating the association between maternal mental health and child injury risk, with many potential confounders difficult to measure and adjust for (e.g. supervision, safety practices). Using a self-controlled case series (SCCS), a within person design where individuals act as their own control, we aimed to investigate the temporal association between child poisoning rates and episodes of maternal depression and anxiety.
Methods Using a cohort of 209,418 mother-child pairs from England who had linked primary care and hospitalisation data from the Clinical Practice Research Datalink and Hospital Episode Statistics, we conducted a SCCS analysis of 2,646 children aged 0–4 who had one or more recorded poisoning between 1997 and 2014. Conditional Poisson regression was used to estimate incidence rate ratios (IRR) for child poisonings during medicated and unmedicated maternal depression and anxiety periods.
Results Child poisoning incidence was higher but IRRs were not significant in the 60 days before depression and/or anxiety episodes compared with well periods. There was no significant increase in poisoning risk during episodes of maternal depression (IRR 1.11, 95% confidence interval 0.73–1.69), depression with anxiety (1.19, 0.71–1.97), or anxiety (1.19, 0.61–2.31) when the mother was not prescribed medications for these conditions. Poisoning risk was however significantly elevated during periods of maternal depression treated with medication, with a 43% higher poisoning rate compared to well periods (1.43, 1.14–1.81).
Conclusions For children who experienced a poisoning, poisoning risk was increased during periods when the mother was treated with medications for depression compared to periods when the mother was well. This finding may reflect that periods of depression treated with medication may be more severe, but does support the need for preventative interventions to ensure safe medication storage and use.

241 ATLAS AND DASHBOARD OF CHILD AND YOUTH INJURY PREVENTION

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Background Visual Analytics (VA) is defined as 'the science of analytical reasoning facilitated by interactive visual interfaces'. An interactive VA system helps users make sense of complex and massive data and supports decision-making. The goal of this project was to develop an interactive web-based child and youth injury Atlas and Dashboard and populate it with existing and novel research data from the CIHR Team in Child and Youth Injury Prevention. The aim was to assist injury professionals, practitioners and policy makers to make informed and timely decisions and take action to improve child and youth injury prevention in Canada.
Methods/description of the problem Broad input from the injury prevention community in Canada was sought to finalise the operational requirements for the Atlas and Dashboard. This took place at several time points: 1) the early stages of development to inform the initial mock-up of the site, 2) once the data visualisations were created to determine if they were useful to users, 3) near completion of the site to obtain feedback on usability from the target audience. Visual Interaction Methodology, which helps users derive insights, acquire knowledge and optimise site use, was used to help stakeholders explore and analyse complex data.
Results Provincial level child and youth injury mortality, hospitalisation, drowning and transport data were made available to users in two different formats: 1) interactive data visualisations of injury trends and patterns, 2) user defined outputs from selectable menus allowing users to sort, view and query injury data. Injury professionals, practitioners and policy makers informed the look, feel and function of the site and provided feedback that improved the user experience.
Conclusions The Atlas and Dashboard integrates an interactive VA system into a website for child and youth injury prevention aimed at injury professionals, practitioners and policy makers in Canada.

242 30 YEARS INJURY SURVEILLANCE IN HARSTAD, NORWAY: A BURN PREVENTION PROGRAM FOR CHILDREN 0–4 YEARS

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Background May 1985, injury surveillance was initiated at Harstad Hospital. Coding was done by the Nordic system for upstream variables. Data from 1985–86 (baseline) showed high thermal burn risk in children 0–4 years old. The consumption of hospital resources for treatment was also high, particularly for scalds in terms of grafting, hygienic precautions, treatment infections and support for patients and parents.
Methods Quasi-experimental design. Harstad (main intervention), six surrounding communities (intervention diffusion) and Trondheim (reference). Based on data on where, when and how injuries occurred, prevention was targeted with a mix of passive and active strategies. Participants interventions: e.g. public health nurses, plumbers, electric appliances stores, politicians, media and the hospital. Scalds caused the most serious burns and were prevented by lowering tap water temperature, installing cooker safeguards and informing parents through home visits and regular health checks for 0-4 children (four yearly).
Results After 10 years burn rates decreased from baseline by 51.5% ($p < 0.05$) in Harstad and 40% in the six municipalities (n.s.) Rates in Trondheim increased by 18.1% (n.s.). Long term results: The rate scalds/contact burns decreased gradually during 30 years. The serious scalds from receptacles with boiling foodstuff pulled down from the stove were mostly eliminated. Mean yearly hospital bed consumption for burns in children 0–4 years from Harstad and the six communities was 26.8 during 1985–94 and 2.1 during 1995–2014. During the last two decades, asylum seekers were overrepresented.
Conclusions Programs targeting burns in children can be effective and sustainable. Local injury data provided stimulus for community action.