Results In 2013, there were 134,546 hospitalizations with at least one diagnosis coded as S06, 8,292 additional hospitalizations coded as OR, and 6,821 hospitalizations coded as SR, representing a total of 149,659 hospitalizations. The fact of adding to the selection of S06 codes hospitalizations with OR codes or hospitalizations with OR and SR codes results in an increasing number of hospitalizations: 6.2% and 11.2% respectively.
Conclusions The analysis of hospitalizations for TBI should not be limited to S06 codes because they produce too many false negatives. The analysis of false positives and negatives associated with the addition of OR or OR + SR codes requires the use of a gold standard to conclude on the best selection and estimate hospital morbidity due to TBI.

682 NOVEL USE OF ELECTRONIC HEALTH RECORDS TO ADVANCE RESEARCH AND MANAGEMENT OF PAEDIATRIC CONCUSSIONS

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Background While our understanding of concussion as an important public health issue among children has grown, broad description of paediatric concussions is limited to high school sports or those treated in an emergency department (ED). Further, non-specialist providers report inadequate training and infrastructure to systematically diagnose and manage these patients. To address these gaps, CHOP and CDC have initiated a novel collaborative effort to examine whether electronic health records (EHRs) can expand traumatic brain injury (TBI) surveillance and research–with a focus on concussion–and to assess whether EHR-based initiatives can improve TBI management.
Methods All patients, age 0–17 years, with at least one clinical encounter with an ICD-9-CM diagnosis of concussion in the CHOP EHR system (7/2010−6/2014) were selected and their initial concussion-related encounter identified.
Results 14,054 patients were included (average age: 12.1 years). Initial analyses indicate that: 50% of patients had their first encounter within primary care and 27% within specialty care; half of all concussions among 5–11 year olds were sports/recreation-related; and introduction of a concussion clinical support tool substantially improved documentation of concussion-specific assessment in the EHR (2% before vs. 70% after implementation in July 2012).
Conclusions This collaborative program leverages the strength of a linked EHR system throughout a large healthcare network (>1 million annual visits) to provide a comprehensive system-wide assessment of paediatric concussion across the developmental age spectrum beyond the ED setting. This is the first such US assessment that included a diverse demographic and socioeconomic sample. This work highlights the potential of EHRs to guide clinical management and facilitate research that can lead to improved concussion prevention and diagnosis.

683 CONCUSSION EDUCATION AND THE THEORY OF PLANNED BEHAVIOUR

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Background Sports-related concussion among youth has been identified as a public health problem. As a result, an abundance of concussion education programmes for youth athletes have been developed. Although some of these programmes have resulted in an increase in concussion knowledge, these programmes have failed to increase athletes' concussion reporting behaviours. Accordingly, research suggests a need for theory-driven concussion interventions that go beyond those that aim at increasing concussion knowledge alone. This study will apply the theory of planned behaviour (TPB) to the development and evaluation of a targeted concussion education programme for athletes aged 13 to 18 years old. The primary aim of this study is to assess the immediate and short-term impact of the programme on intention to report concussion and concussion reporting behaviours; and to explore, the process of implementation and the relationship between this process and the programme's outcomes.
Methods This study will employ a cluster randomised control trial, with data collection at baseline (T0), immediately post-intervention (T1), and three-months after programme implementation (T2). The sample will be comprised of county-level Gaelic Athletic Association (GAA) clubs throughout the Republic of Ireland and will include teams with athletes aged 13 to 18 years old. Using a range of structured questionnaires and qualitative measures, data will be captured on athletes' (i) attitudes towards concussion and concussion reporting, (ii) subjective norms, (iii) perceived behavioural control, (iv) intention to report concussion, (v) concussion reporting behaviour and (vi) programme fidelity.
Results Preliminary results from the evaluation and issues with programme implementation will be presented. Quantitative data will be analysed with SPSS Version 22. Thematic analysis will be used to analyse qualitative data.
Conclusions Findings from this evaluation will be used to assess the efficacy of the TPB in programme development and evaluation and will support the knowledge and practice of primary and secondary concussion prevention. Results from the process evaluation will assist in helping understand the context within which the programme was implemented and how these characteristics may affect the quality of implementation.

684 COACH COMMUNICATION ABOUT CONCUSSION SAFETY AND THEIR PERCEIVED ABILITY TO ASSESS AND MANAGE CONCUSSION

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Background Annually, it is estimated that 3.8 million sports- and recreation-related concussions are sustained in the USA alone, with a particularly high incidence among adolescents. At youth sporting events, however, medical professionals are rarely