Does increasing the severity of penalties assessed in association with the ‘zero tolerance for head contact’ policy translate to a reduction in head impact rates in youth ice hockey?

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Background The risk of concussion is high in Canadian youth ice hockey. Aiming to reduce this burden, in 2011 Hockey Canada implemented a national ‘zero tolerance for head contact (HC)’ policy mandating the penalization of any player-to-player HC. In 2018–20, Hockey Canada further amended this HC-policy including stricter enforcement of severe HCs.

Objective To compare HC rates and HC enforcement pre-policy, post-policy, and following policy amendments in elite U15 Canadian youth ice hockey.

Design Prospective cohort.

Setting A collection of events recorded with a video-camera located at the highest point near centre-ice in public ice hockey arenas in Calgary, Alberta.


Assessment of Risk Factors An analysis of HC-policy implementation and policy amendments across three cohort years.

Main Outcome Measurements Using Dartfish video-analysis software; all player contacts and HC (direct (HC1), indirect (e.g., boards, ice) (HC2)) were tagged using validated criteria. Univariate Poisson regression [clustering by team-game offset by game-length (minutes)] was used to estimate HC1 and HC2 incidence rates (IR) and incidence rate ratios (IRR) between cohorts.

Results A total of 11,427 physical contacts were tagged (n2008–09=3896, n2013–14=3183, n2020–21=4348), with 538 contacts including the head (340 HC1,198 HC2) (n2008–
09HC1=125, HC2=66; n2013–14HC1=110, HC2=44; n2020–21HC1=105, HC2=88). With additional rule modifications, a 30% reduction in HC1s emerged (IRR2013–2020=0.70, 95%CI0.51–0.95). Since the HC-policy implementation, HC1s decreased by 24% (IRR2008–2020=0.76, 95%CI0.58–0.99). The proportion of HC1s penalized was similar across cohorts (P2008–09=14.4%; P2013–14=15.5%; P2020–21=16.2%).

Conclusions The HC-policy amendments and increased policy implementation time have led to a decreased rate of HC1s. However, referee enforcement can further boost the HC-policy effectiveness. These findings can help future referee training and potential rule modifications to increase player safety nationally.

Injuries in Portuguese recreational surfers

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Background Surfing practice has been growing in recent years with an increasing number of recreational practitioners, especially in countries like Portugal with very good ocean conditions. Most studies consider all professional and recreational surfer injuries.

Objective Determine the rate of injuries and their characteristics during the recreational surf practice.

Design Retrospective cohort study.

Setting Standardised data collected with a validated questionnaire.

Patients 150 Portuguese surfers aged between 8 to 68 years practising during at least one of the two seasons in the study agreed to participate.

Interventions Both gender recreational surfers.

Main Outcome Measurements Retrospective assessment of the last 2 years injuries occurrence and conditions of occurrence.

Results A total of 33 athletes sustained 45 injuries (22% injured players) with 9,72 injuries per 1000 h of exposure. The greatest number of injuries occurred in the lower leg (ankle 20%; knee 13%) followed by the shoulder (17.8%). The most common injury mechanism was collision/direct contact (59%) or torsion (11.4%) with the joints most affected (24.4%). Injuries more frequent were wound (17.8%), contusion (11%) and inflammation (11%). The surfboard (28.9%) and the athlete itself (24.4%) were the main cause of the injury, occurring mainly when performing manoeuvres (20.9%) especially descending the wave (16.3%). There are no statistically significant differences in injury frequency per 1000 h of exposure with regards to sex, surfer position (foamy or regular), surfing side (left, right or both). Male athletes demonstrate higher injury rates (women 7.94, SD 1.96; men 10.27, SD 2.89) per 1000 h of exposure.