

**Setting** Focus groups were conducted with Para athletes at the National Paralympic training center in Accra, Ghana and virtually via Zoom.

**Participants** Twenty-six national- and international-level Para athletes with varying disabilities, 18 years or above, living and training in Ghana, India, or Brazil.

**Main Outcome Measurements** Four a priori themes with multiple subthemes were considered: characteristics of, effects of, growth after, and strategies to address abuse.

**Results** Athletes described a wide range of harms experienced both within and outside of sport. In addition to more commonly recognized modes of abuse such as physical and sexual, athletes focused on three less easily recognized forms of abuse: financial abuse, neglect, and disability stigma. Athletes described abuse as operating on both interpersonal and systemic levels. Cultural and societal factors influenced athletes' perceptions and experiences of harms.

**Conclusions** Para athletes from less-resourced countries represent the largest pool of global sportspersons eligible for Olympic-level participation, and have the highest need for protection against abuse, but their voices are seldom heard. Sport stakeholders concerned with abuse prevention must understand their experiences and integrate their insights and priorities into sport safeguarding policies, programs, and interventions. As new insights are added to the current evidence base, athlete-generated and locally-relevant preventative strategies can better protect all athletes.

445

ABSTRACT WITHDRAWN

446

#### INCIDENCE OF HEAD CONTACTS, PENALTIES AND PLAYER BEHAVIOUR IN YOUTH ICE HOCKEY: EVALUATING THE 'ZERO TOLERANCE FOR HEAD CONTACT' POLICY CHANGE

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**Background** Concussion risk in ice hockey is amongst the highest for youth sport. To reduce this burden, in 2011 Hockey Canada implemented a national 'zero tolerance for head contact (HC)' policy mandating referees to penalize all player HCs; however, higher concussion rates have been observed following this policy in players aged 11–14.

**Objective** To compare HC rates and HC-policy enforcement in U15 (previously Bantam) ice hockey leagues before (2008–09) and after (2013–14) the 'zero tolerance for HC' policy implementation.

**Design** Prospective cohort.

**Setting** Calgary, Alberta, Canada.

**Participants** Thirty-two elite (upper 30% by division, allow body checking) U15 games pre ( $n_{2008-09}=16$ ,  $n=510$  players)

and post ( $n_{2013-14}=16$ ,  $n=486$  players) HC-policy implementation.

**Assessment of Risk Factors** The 2011 HC-policy change mandates the penalization of any intentional or unintentional player/direct HC.

**Main Outcome Measurements** Dartfish video-analysis software with validated criteria for identifying HC types [direct HC (HC1), indirect HC (e.g., boards) (HC2)] and other player-to-player contact behaviours were used. Univariate Poisson regression [adjusted for cluster by team-game, offset by game length (minutes)] was used to estimate HC incidence rates (IR) and incidence rate-ratios (IRR) between cohorts.

**Results** A total of 506 HCs ( $n_{2008-09}=261$ ,  $n_{2013-14}=245$ ) were analyzed (IR<sub>2008-09</sub>=16.6/100 team-minutes; IR<sub>2013-14</sub>=15.5/100 team-minutes). The rate of HC1 (IRR=1.05, 95% CI: 0.86–1.28) and HC2 (IRR=0.74, 95% CI: 0.50–1.11) did not differ with the implementation of the HC-policy. Only 12.0% and 13.6% of HC1s were penalized pre- and post-policy respectively. Pre-policy, HC1s were commonly penalized as roughing or elbowing penalties (59%), while post-policy HC1s were penalized with the HC penalty (76%).

**Conclusions** Despite policy implementation for mandatory enforcement of direct HCs, there was no difference in the rate of HC1s and HC2s, or the proportion of HC1 penalized pre- and post-HC-policy enforcement. This research will be instrumental to inform Hockey Canada's future referee training and rule enforcement modifications.

447

#### SURVIVAL AND RISK ANALYSIS OF 10 MONTHS SURVEILLANCE IN ELITE PARA ATHLETES

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**Background** Injury and illness surveillance in Paralympic athletes was implemented in the past. First studies reported high incidences but are often limited to rates per exposure.

**Objective** Survival and risk analysis of longitudinal data on health problems and their burden were performed.

**Design** Prospective observational study

**Setting** Surveillance of elite Paralympic athletes from May 2019 until February 2020.

**Participants** 85 German Paralympic athletes preparing for Tokyo 2020 were included. Six athletes dropped-out during the monitoring phase, leaving 79 athletes included in the evaluation (30 females; 49 males; age: 29.5±10.9 years).

**Intervention** Weekly completion of the Oslo Sports Trauma Research Center questionnaire on health problems using a web application.

**Main Outcome Measurements** Median time to first severe health problem, leading to time loss or restriction of full participation in training or competition, and hazard ratio (HR) depending on sex, age or impairment. Calculation of the burden (time loss days per athlete per year) of health problems.