wards due to resource constraints. We evaluated a mobile phone text message intervention (YourCall) designed to overcome this challenge.

Methods Of 1564 potentially eligible injured patients aged 16–69 years recruited from the three trauma admitting public hospitals in Auckland and screened using the Alcohol Use Disorders Identification Test (AUDIT), 598 were identified as moderate risk drinkers and enrolled in a parallel, single-blind RCT. The intervention group received 16 text messages incorporating BI principles in the four weeks after hospital discharge. Controls received one text message acknowledging participation in the study. Primary outcomes comprised differences in hazardous alcohol use (AUDIT-C) between the intervention and control groups at 3, 6 and 12 months following the injury. Data were analysed using a mixed-effects model for repeated measures.

Results Baseline features were similar in both groups (71% males; mean age 34 years; 21% Māori, 62% European; mean AUDIT-C 6.8). Significant reductions in hazardous alcohol use during follow-up were observed in both groups. A small but significantly lower risk of hazardous drinking was evident in the intervention compared with control group (least square means difference: -0.322 ; 95% CI: -0.636 , -0.008). This effect was maintained across the 12-months of follow-up and similar among Māori and non-Māori (interaction $p = 0.257$).

Conclusions The effect of the Your Call intervention was similar to most standard BIs despite its modest intensity and the restriction of this trial to moderate risk participants only. Text interventions are scalable low cost approaches that can overcome barriers and inequities in implementing BIs in trauma care settings. The expanding cell phone coverage makes this modality particularly salient in economically disadvantaged groups and low- and middle-income countries.

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CHALLENGES IN THE IMPLEMENTATION OF CONCUSSION GUIDELINES IN COMMUNITY SPORT

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10.1136/injuryprev-2016-042156.260

Background Concussion in sport has become a major injury prevention priority worldwide because of its potential severity. International consensus guidelines for concussion in sport have been developed and promoted. To date, there has been little consideration of the barriers that might influence how well these guidelines are adopted and implemented in practice, especially in community sport.

Methods A self-report online survey was developed from Theory of Planned Behaviour constructs. 111 coaches and sports trainers from community Australian Football and Rugby League completed both pre- and post-season surveys and data on their attitudes towards using concussion guidelines was extracted. Post-season attitudes were assessed relative to pre-season attitudes and whether or not responders had used the guidelines during the intervening playing season. Specific feedback about any challenges in using the guidelines was also sought.

Results 71% of respondents had used the guidelines. Post-season attitude was related to pre-season attitude ($p = 0.002$), football code ($p = 0.015$), and team role ($p = 0.045$). There was a significant interaction between team role and guideline use ($p = 0.012$), with coaches who had used the guidelines, and sports trainers who had not, reporting more positive post-season

attitudes. Implementation challenges included disputing of decisions about return-to-play by players, parents, and coaches, and a perceived lack of time. Recommendations for improved guideline materials included using larger fonts and formal witnessing of advice given.

Conclusions This is the first study to examine the implementation of concussion guidelines in community sport. Information from those who attempt to use them is valuable to inform the refinement of implementation and dissemination processes around concussion guidelines across sports. New education should be developed about the importance of advice given to parents/players them by those who follow these guidelines.

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THE DISTRICT OF COLUMBIA CONCUSSION CARE & TRAINING PROJECT: A MODEL FOR YOUTH CONCUSSION EDUCATION

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10.1136/injuryprev-2016-042156.261

Background The District of Columbia's "Concussion Protection Act of 2011" legislation requires training of youth sports program stakeholders to ensure concussion awareness and training to properly recognise, treat, and recover from a concussion. A partnership between the Children's National Medical Centre, MedStar Sports Medicine and community stakeholders was established in March 2015 to develop an infrastructure and pathways for appropriate training and documentation of compliance.

Methods The Concussion Care and Training Program (CCTP) included four priority areas: Creating Awareness, Concussion Training, Policy and Protocol Development, and Evaluation and Performance Measurement. The CCTP team implemented a combined clinical and public health approach to provide comprehensive, up-to-date training and documentation. Partnerships were established with program administrators in schools, recreation programs, and community associations to establish training needs and maximal accessibility of target audiences. Specific products were developed and disseminated across the community.

Results The CCTP performed 29 training activities to over 6000 participants. Of the 225 training participants who completed the program assessments, the largest affiliations were associated with Children's School Services (24%), Public Schools (17%), and Private Schools (14%). The most common participant roles were School Nurses (44%) and Coaches (33%). Overall, 40% of training participants were aware of the DC concussion law prior to the training. Only 41% of coaches and 32% of parents claimed to be aware of the law.

Conclusions This model program reached stakeholders of all ages and levels of youth athletes across diverse communities to provide concussion education/training, media outreach and public awareness. This model may be used by other localities to increase youth sports concussion awareness and training among community participants.

262 THE ONLINE CONCUSSION AWARENESS TRAINING TOOL

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10.1136/injuryprev-2016-042156.262

Background The online Concussion Awareness Training Tool (CATT—www.cattonline.com) includes three toolkits providing training in the recognition and treatment of concussion: Medical Professionals—MP; Parents, Players and Coaches—PPC; School Professionals—SP.

Objective To create an accessible, regularly updated online resource based upon the Zurich Consensus Statement on Concussion in Sport and evidence-based resources, intended to support standardise concussion diagnosis, treatment and management. Each toolkit includes a self-paced learning module as well as tailored resources.

CATT MP aims to standardise practice in a clinical setting with a focus on the paediatric patient.

CATT PPC speaks to concussion identification and management, with Smartphone accessible resources: *Concussion Response Tool* and *Questions to Ask Your Doctor*.

CATT SP includes *Return-to-Learn* protocol and resources for teachers, counsellors and others in the school setting.

Results For each of the CATT toolkits, evaluation was undertaken with a pre-post intervention survey design. Sample sizes of at least 33 were required to compare the change in scores with the power to detect a large effect size of 0.5.

CATT MP was launched mid April, 2013. Physicians demonstrated significant positive change in concussion practices ($p = 0.001$), and significant change in knowledge by those treating more than 10 concussions/yr ($p = 0.039$). Nurses had significant positive change in practices ($p = 0.005$) and attitudes ($p = 0.035$). CATT PPC was launched mid June, 2014. Parents demonstrated significant positive change in concussion knowledge ($p = 0.002$). CATT SP is anticipated for launch in November 2015, with an accompanying evaluation.

Conclusions Concussion is an under-diagnosed medical condition, requiring both physical and mental rest. CATT addresses this gap by increasing knowledge and awareness among appropriate audiences. Good concussion management can reduce related health problems and the risk of long-term brain damage.

263 HEADS UP FOR YOUTH SPORT CONCUSSION: MOVING FROM AWARENESS TO EVALUATION OF BEHAVIOURAL INTENTION

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10.1136/injuryprev-2016-042156.263

Background Children and adolescents account for an estimated 65% of emergency department visits for sports and recreation-related traumatic brain injuries, including concussions. Immediate identification and appropriate response to a concussion can help reduce the risk of short- or long-term health problems that can affect thinking, learning, behaviour, and/or emotions.

Description of the Problem Combining innovative and evidence-based communication strategies, CDC created HEADS UP.

HEADS UP is a series of educational initiatives grounded in audience preferences for content, design, format, and distribution channels. The content is specifically built to draw attention to what was considered an under-reported and under-identified public health problem and is designed to improve awareness, early identification and management of sports-related concussion.

Results In the last decade, CDC's HEADS UP has partnered with over 85 organisations, received over 200 million media impressions, distributed more than 6 million print resources, and obtained over 40 million social-media impressions. In addition, through HEADS UP, CDC has trained over 3 million sports coaches and health care professionals through online training courses required by many state policies and sports programs. Evaluation results indicate improvements in knowledge and attitudes towards concussion after exposure to HEADS UP materials.

Conclusion CDC's HEADS UP demonstrates how a health communication initiative can play a critical role in driving the science of an important health issue and can help support implementation of policies on a large-scale. As CDC embarks on the next stage of HEADS UP, continued emphasis will be placed on adapting to the changing landscape of concussion research and awareness and identifying effective approaches for improving both behaviours and the culture of concussion nationwide.

264 PARENT AND PLAYER CONCUSSION KNOWLEDGE AND FACILITATORS OF APPROPRIATE MANAGEMENT IN YOUTH ICE HOCKEY

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10.1136/injuryprev-2016-042156.264

Background Concussions are a significant burden in youth ice hockey that can have serious health consequences if not identified and managed appropriately. Parents' role in facilitating identification and appropriate concussion management as well as child education is vital. This project aims to understand parent and player concussion knowledge and potential barriers to physician diagnosis and appropriate return to play after concussion.

Methods Using a mixed methods study design, 63 players (ages 11–14) and 82 parents from Vancouver and Calgary (Canada) completed a survey on concussion knowledge. Qualitative interviews of 6 mothers and 7 fathers explored the barriers and facilitators associated with physician follow-up after a concussion.

Results All parents and 93.6% players identified concussion as a brain injury. When asked to identify concussion symptoms from a list with 8 concussion and 8 distractor symptoms, parents and players had similar mean scores (12.7 and 12.3/16 respectively). Only 50.8% of parents and 14.3% of players were able to identify the correct course of action for all three scenario-based concussion management questions. Finally, only 59.8% of parents and 11.1% of players recognised the term “graduated return to play protocol”. A preliminary analysis of themes from the interviews highlighted barriers to physician follow-up: Parents' belief that the concussion was not serious, concussion symptoms