Results Almost half of the sample (44.5%) reported involvement in at least one MVC as a driver. The majority also reported engaging in cell phone calls while driving (73.2%, n=281) and texting while driving (61.7%, n=237). A 2-factor structure was confirmed, revealing that cell phone use loaded highly on a latent factor largely consisting of intentional driving violations. A binary logistic regression revealed a significant association between the probability of reporting a crash and this reckless driving factor (Wald=4.058, p=0.044) as well as impulsivity (Wald=8.602, p=0.003).

Conclusions These findings suggest that cell phone use does not represent a unique source of reckless driving behavior associated with crashes.

Significance and Contributions Interventions for improving driver safety should adopt a holistic approach addressing patterns of risk-taking in young drivers.

Equity and methods

DATA COLLECTION/ABSTRACTION PROCESS

IMPROVEMENTS TO ACHIEVE INJURY-RELATED HEALTH EQUITY IN OUR NATIONAL TRAUMA HEALTHCARE SYSTEM

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Statement of Purpose Identifying injury-related disparities requires accurate patient representation. Understanding data collection/abstraction staff perspective is critical to developing implementation models for integrating health equity data elements into electronic medical record (EMR) and trauma registry systems. To identify barriers/facilitators to collecting/abstracting accurate equity data, we assessed perspectives of national stakeholders in each U.S. region and Emergency Department (ED) registration and trauma registry staff locally.

Methods We conducted a Delphi process with 17 national experts in trauma care systems (included based on recommendations from local and national trauma care leaders) and focus groups with 14 ED patient registration and 9 hospital trauma registry staff. Topics included process of data collection/entry into EMR and data abstraction into trauma registries and barriers/facilitators to accurate collection/abstraction of equity data elements. Audio-recorded focus groups and Delphi recommendations were qualitatively analyzed, and the latter findings were joint-ranked based on feasibility scores and Kappa-based score consistency. Findings were triangulated with ED patient registration observations and trauma registry staff workflow. We developed an implementation model addressing identified barriers/facilitators.

Results Delphi results indicated staff time/investment in process changes as the biggest barriers; facilitators were simplicity and brevity (self-report), and quality improvement checks. ED staff barriers included experiences with patients reacting negatively, and misunderstanding data collection purpose. Cultural-sensitivity training, script for explaining importance of equity data collection, and required data entry for a minimum dataset were facilitators. Trauma registry staff barriers involved needing to search notes for information (e.g., injury address/housing status); staff preferred auto-populated and designated EMR discrete fields.

Conclusions Barriers/facilitators identified differed among national stakeholders, ED registration staff, and trauma registry staff. Successful implementation will involve ongoing staff training, opportunities for patient self-report, and frequent quality improvement checks.

Significance Improved data collection and abstraction processes can increase accuracy of equity measures, facilitating better identification of injury-related disparities.

A RANDOMIZED TRIAL TESTING REMUNERATION PROTOCOLS TO MAXIMIZE CONCUSSION PATIENT RETENTION FOR REAL-TIME SYMPTOM AND ACTIVITY MONITORING

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Statement of Purpose We are honing the ReCoUPS (Recovering Concussion Update on the Progression of Symptoms) protocol to monitor concussion patients using ecologic momentary assessment (EMA), and accrue data revealing the relationship between physical and cognitive rest and clinical outcomes in the days and weeks post-injury.

Methods/Approach Our randomized trial uses behavioral economics to identify a remuneration strategy that enhances retention. Staff at one pediatric and one adult ED enroll concussion patients using the ReCoUPS platform, that assigns participants to one of four treatment arms that dictate the remuneration scheme. Participants receive a Fitbit, download the ReCoUPS app onto their smartphone, receive 3 prompts daily, and respond over 3 weeks. The EMA data collected include concussion symptoms and cognitive rest/activity (self-reported time reading, time at work/school) reported at each prompt, screen time, and step count (Fitbit). The maximum possible remuneration for three arms is $300 for adults (age 18–64 years) and $50 for children and adolescents (13–17 years), whereas in one arm only a Fitbit is given to keep.

Results Fifteen participants were enrolled in the EDs. The proportion of responses completed was 87% in the loss-based arm and 86% in the streak accrual arm, compared to 47% where the FitBit was given as remuneration, and 46% in the control arm where the maximum given regardless of number of responses completed. Enrollment will continue to 20 in each arm to determine whether these differences remain.

Conclusions Loss-based and streak remuneration were equally effective to prevent study attrition in this longitudinal follow-up study, whereas the Fitbit remuneration and flat-fee control were not effective.

Significance and Contributions to Injury and Violence Prevention Science Remuneration plays a key role in retention and can help accomplish the longterm follow-up required to obtain data on concussion recovery.