pandemic response – transporting patients, essential workers, goods, and services – and will continue to be critical in the recovery phase as countries restructure ‘COVID safe’ transport systems and revamp their economies.

The report concludes by identifying areas that require urgent additional research, policy, and regulation development.

7B.003 REDUCING MUSCULOSKELETAL INJURY RISK USING WEARABLE AND SMARTPHONE TECHNOLOGY

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10.1136/injuryprev-2021-safety.173

Context Wearable and smartphone technology has become a core element in the injury prevention and rehabilitation process for professional athletes. This technology can also be used in the prevention of injury in the workplace, and the return to work process following injury.

Process Wearable technology is used collect accurate and valid information which enables:

- The physical demands of the tasks to be measured and assessed
- The physical capacity of the individual to be measured and assessed
- The identification of injury risk when the demands of the task are greater than the capacity of the individual

Analysis The the physical demands of individual work tasks and the capacity of workers to perform these tasks was quantified using a combination of linear and rotational acceleration variables to calculate load.

Outcomes The data collected enabled:

- The creation of the benchmarks for the safest method of performing work tasks
- Assessment of workers performing these work tasks and comparison to the benchmark to identify injury risks for uninjured workers, and provide them with feedback to reduce their injury risks.

Learning Outcomes Delegates who attend this session will receive:

- Background on the accuracy and validity of wearable technology for movement analysis in the workplace
- An overview of the data analysis and reporting process
- Various case studies involving the use of wearable technology to identify and reduce injury risk and guide the return to work process following injury

7C – Alcohol, Drugs & Injury, March 25, 2021

7C.001 CHANGING DRUG OVERDOSE DEATHS PATTERNS WHERE US RATES ARE HIGHEST: GLOBAL IMPLICATIONS

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10.1136/injuryprev-2021-safety.174

Background Rural West Virginia leads the US in overdose deaths. The role of multiple drug combinations in fatality trends is unclear especially given rapid increases in methamphetamine involvement.

Methods Toxicology data from our WV Forensic Drug Database contains drug levels on all drug-involved deaths in WV, including determinations if drugs caused or contributed to death. Trends from 2013 to 2018 were examined including separate methamphetamine analyses.

Results Death rates increased dramatically to 49.6/100,000 with most deaths involving poly-substances with fentanyl. Heroin-related deaths increased from 138 to 257 in 2017, falling in 2018, as did prescription drug deaths. Methamphetamine involvement increased 12-fold (28 cases in 2013 to 336 cases in 2018). Most methamphetamine-related deaths (N=815) involved other drugs (only 25% involved methamphetamine alone). Opioids were present in 63.8% of methamphetamine deaths; fentanyl/FAs having the largest increase (4% 2013, to 49% in 2018) and prescription opioids decreased by over 100%. Despite increasing methamphetamine deaths, proportions with only methamphetamine did not change over time. Heroin presence without fentanyl/FAs steadily decreased for methamphetamine-involved deaths; by 2018, only 2% had heroin present without fentanyl/FAs.

Discussion Drug-related deaths in this rural state continue to increase and most involve multiple drugs with a rapid rise in methamphetamine over the past three years. Unlike urban drug problems, the origins of the WV epidemic are largely iatrogenic, starting with extremely high opioid prescription rates. This presentation will outline the progression of the rural drug problem in WV, describe harm-reduction efforts and include more detailed statistical modeling of trends.

7C.002 VIOLENCE DOMINATES THE BASELINE FOR SDG 3.5.2 TO REDUCE HARMFUL ALCOHOL USE

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10.1136/injuryprev-2021-safety.175

Background/Aims Social Development Goal 3.5.2 calls for a 10% reduction in harmful alcohol use. We began evaluating efforts to achieve this goal in Alexandra, South Africa; Brasilia, Brazil; Columbus, Ohio; Jiangshan, China; Leuven, Belgium; and Zacatecas, Mexico by estimating baseline harm.

Methods Following the Global Burden of Disease (GBD), we measured alcohol-attributable burden in Years of Healthy Life (YHLs) lost. GBD estimates harmful alcohol use from a jurisdiction's alcohol consumption and diagnosis-specific relative risk distributions. We assessed alcohol consumption and alcohol-involved violence through surveys of 1500 adults per city and, except in Columbus, 1500 youth. We combined those data with GBD's relative risk curves and accessible police-reported road crash data to estimate the baseline. We incorporated the financial effects of health problems into the baseline by converting them to YHL-equivalents. For use in conversion, we defined a standardized YHL as the average year of life expectancy lost to a crash death or homicide.

Results Violence – physical assault, sexual assault, drink-driving crashes, and suicide – comprised 84% of the burden in Alexandria, 74% in Zacatecas, 65% in Leuven, and 56%-59% elsewhere. Physical and sexual assault alone comprised 32%-72%. Drink-driving comprised 10%-21%.

Conclusions Achieving this SDG goal will require creating effective violence prevention programs. Our physical assault estimates greatly exceed GBD's estimates. GBD's assault incidence sets a high severity threshold for qualifying cases. Its alcohol-attributable fractions for physical assault average one third of the estimates in widely respected multi-national studies. GBD 2017 also attributed no sexual violence to harmful alcohol use.

7C.003 DRINK SPECIAL LAWS AND ALCOHOL-RELATED FATAL CRASHES IN THE UNITED STATES

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10.1136/injuryprev-2021-safety.176

Background In the United States, every day, close to 30 people die in alcohol-impaired related crashes. Given the known role of alcohol in traffic injuries, we assessed the impact of drink special laws on alcohol- and non-alcohol-related fatal motor vehicle crash rates.

Methods We performed a synthetic control analysis of US data from 1982 to 2017. We used publicly available data to evaluate the effects of implementing any drink special law at the state-level during the study period on fatality rates per 100 million vehicle-miles of travel. We used an enhanced version of the SC method for the analysis of multiple treated units.

Results Overall, treated states with any drink special law reduced alcohol-related fatal crashes per 100 million VMT by 0.01 (p-value = 0.84) in year one, 0.10 (p-value = 0.14) in year three, 0.07 (p-value = 0.28) in year five, and 0.16 (p-value = 0.01) in year 10 post-implementation compared to the synthetic control trend. Implementation of any drink special law also produced reductions of non-alcohol-related fatal crashes per 100 million VMT by 0.19 (p-value = 0.11) in year one, 0.24 (p-value = 0.03) in year three, 0.25 (p-value = 0.00) in year five, and 0.18 (p-value = 0.00) in year 10 compared to the synthetic control trend. Findings for the number of laws implemented and each drink special laws were mixed.

Conclusions Drink special laws appeared to be associated with larger reductions of non-alcohol-related fatal crashes but no with the hypothesized target population, the alcohol-related fatal crashes.

7D – Road – Alcohol, March 25, 2021

7D.001 DRINK DRIVING – WHY WE OFTEN FAIL TO LEARN FROM BEST PRACTICE

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10.1136/injuryprev-2021-safety.177

In Europe, approximately 25% of all traffic accident fatalities are alcohol-related. Governments and other responsible authorities have carried out a number of more or less effective and (also) ineffective measures to prevent drink driving. Some policies and measures are proven to be successful (e.g. more frequent random BAC tests for all drivers, zero tolerance for novice and professional drivers, lower BAC levels in general, alcolocks for repeat offenders, structured and long-term campaigns and educational programmes etc.), but are still not fully included in many legislations and are not consistently implemented in practice. Despite the fact that drivers today are aware of the tragic and financial consequences they can bring to themselves and others while driving drunk, and that the public opinion with regard to drink driving largely changed (most Europeans nowadays openly oppose to drink driving), drunk drivers are still responsible for about a quarter of all fatal accidents in Europe. Therefore, new, better and more effective measures are urgently needed. The authors will present an extensive existing scientific evidence from many studies and research in a structured way and present many good examples from practice as well (e.g. evidence-based interventions). Presentation will be based on the document (guidelines and recommendations) which was recently published by author (Košir) and co-author (Talić) in Slovenia and co-sponsored by the Slovenian Traffic Safety Agency and the Ministry of Health. Link to the document: <https://goo.gl/cU4zWg>.

7E – intentional, March 25, 2021

7E.001 IF WE DON'T ASK, WE DON'T KNOW AND WE CAN'T HELP

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10.1136/injuryprev-2021-safety.178

Context In Australia, one woman is murdered by a partner every 9 days and 26,000 children are homeless every year due to domestic violence. Consumer-centred, cost-effective violence prevention programs are urgently needed.

Research indicates those exposed to violence want to be asked about it. However, clinicians find it too awkward and too time-consuming. As a result, questions are not asked and the exposure to violence continues. Our aim is to design and implement an innovative screening program for partner violence that is acceptable to both consumers and health staff, transferable to other settings and sustainable into the future.

Process 1) developed screening and risk assessment tools, validated by consumers and health staff; 2) developed referral pathways; 3) trained staff; 4) modified clinic layout to be consumer-centred; 5) implemented program at Sexual Health Quarters; 6) collected staff and consumer feedback before and after implementation.

Analysis quantitative analysis of 1) prevalence of violence; 2) characteristics of survivors; 3) support required; 4) staff and consumer feedback.

Outcomes In the first 6 months of the program we screened 1500 women, identified exposure to violence in 18% and provided counselling to 40% of those exposed. All consumers and staff surveyed supported this program, with 90% of staff admitting that it was easier than expected.