

## **UNECE GRSP IWG Equitable Occupant Protection (EqOP) Task Force 5 – Extension to New Injury Types**

Draft minutes of the second meeting.

On-line meeting, September 18, 2024.

22 participants.

### **1.) Approval of agenda**

Approved.

### **2.) Approval of minutes from previous meeting**

Approved.

### **3.) Presentations**

We did focus attention on two fields in this meeting, namely brain injuries and injuries to extremities. In addition, an introduction to a study of crashes and pregnancy was given.

1. Brain injuries.
  - 1) Axonal Tolerance for Uniaxial Stretching.  
Yasuhiro Matsui, NTSEL, presented and discussed results regarding axonal strain and strain rate. One conclusion is that the rate of strain does affect outcome of diffuse axonal injury further to the strain itself.
  - 2) Product of Strain and Strain Rate for Predicting Diffuse Brain Injury.  
Liyang Zhang, Wayne State, presented further on strain and strain rate, regarding the proposed criterion based on the product of strain and strain rate, which seems promising to predict diffuse axonal injury.
2. Injury types that we are seeing within the upper extremity and the lower extremity for belted occupants in frontal collisions for MY2009+ vehicles.  
Jason Forman, UVA, presented statistics on both leg and arm injuries. Both have high prevalence for women. Other findings from the same sample, was that MAIS2 brain injuries have high frequencies and rib fractures are not the only thoracic injury type.
3. Jason Forman, UVA, introduced a study of pregnancy fatalities, which have the same rate as fatalities to children in road crashes.

### **4.) A.O.B.**

The chair initiated a short discussion regarding the OICA statement in the previous meeting (TF5-01-02e). OICA said in the previous meeting that we should not define regulatory changes without understanding the injury mechanisms, i.e., understand how the injuries occur. The chair highlights again that although this approach is correct in principle, we must accept that we should not wait to be perfect before we make a step into the right direction. As long as we know that an assessment method and criterion provides improved protection, we can also accept not to have fully understood what causes the injury on the microscopic level. For brain injuries, discussions often get lost in the details – as long as we can agree on some general understandings (e.g. avoid high rotations), we can consider them in our assessments and would make already progress.

### **5.) Next meeting**

October 2, 12-14 CET.