

## SUPPLEMENTARY MATERIAL

Additional stakeholder interview demographic information				
Participant ID	Main discipline	Main role	Years of experience	Main level
DRIV1	Rallying	Driver/co-driver	5	Amateur
DRIV2	Circuit racing	Driver	~28	Professional
DRIV3	Circuit racing	Driver	~24	Professional
DRIV4	Rallying	Driver	~14	Professional
MED1	Circuit racing	Doctor	27	Amateur
MED2	Circuit racing	Doctor	7	Amateur
MED3	Circuit racing	Surgeon	25	Professional
MED4	Rallying	Paramedic	~13	Professional

Number of surveyed participants by age group						
Group	Age group					
	16-25	26-35	36-45	46-55	56-65	66-75
DRIV	23	21	23	25	8	1
MED	3	8	23	26	26	3

*Note.* MED=Medical personnel, DRIV=Driver, Co-driver.

Number (%) of surveyed participants per motorsport sub-type				
Group	Circuit	Rallying	Karting	Other
DRIV	26 (25.7)	43 (42.6)	15 (14.9)	17 (16.9)
MED	58 (65.2)	24 (27.0)	1 (1.1)	7 (6.7)

*Note.* MED=Medical personnel, DRIV=Driver, Co-driver; Other=Cross country, Hill climb, Sprint and Trials

## Survey scenarios for assessing attitudes towards concussion

*Scenario 1. A driver suffers a concussion during a race. Team principal decides to keep the driver out of the next race that same weekend. The driver's team loses championship points.*

*Scenario 2. Driver A suffered a concussion during a winter test day. Driver B suffered a concussion, of the same severity as Driver A, before competing in the deciding race of a championship. Both drivers were kept out of their races and had persisting symptoms.*

*Scenario 3. A driver is involved in an accident. There is some indication of concussion.*

*Scenario 4. A driver suffered a concussion and he has a race in two hours. He is still experiencing symptoms of concussion. However, the driver knows that if he tells anyone about the symptoms, he will likely be kept out of the race.*

*Note. Scenarios adapted from RoCKAS (Rosenbaum & Arnett, 2010)*

## Key reasons surveyed medical personnel find it difficult to assess for concussion in motorsport

<b>Cause &amp; supporting quotes</b>	<b>Frequency</b>
Complexity of symptoms and diagnosis <ul style="list-style-type: none"> <li>• There are so many variants...</li> <li>• Sometimes it is obvious, but the signs can be subtle</li> <li>• Concussion may not be apparent for several hours or days after the injury...</li> </ul>	23
Driver/team behaviour/pressure to compete <ul style="list-style-type: none"> <li>• Driver usually unwilling to answer questions fully (and truthfully)</li> <li>• ...drivers and teams put pressure on each other to try and hide or be reluctant to seek medical help because of the risk of being stopped or missing a race</li> <li>• Pressure from teams and TV</li> </ul>	19
Logistical challenges (time/location/facilities) <ul style="list-style-type: none"> <li>• ...difficult to assess within the confines of a circuit medical centre with limited tests and equipment available and non-specialist medics (i.e., not neurologists).</li> <li>• Time constraints. Lack of standardised questions...</li> </ul>	10

*Note. Frequency=number of times theme was endorsed by respondents. Analysis based on responses from N=30 medical personnel, some of whom reported more than one reason.*