"A Mobile Application for the Triage of Pedestrians Brain Injuries in Vehicle Collision" (SENTINEL)

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Problem We Aim to Solve

- Pedestrian Road Traffic Collisions (RTC) can cause serious injuries or even death.

- Quick action at the scene can make a big difference, helping the person survive and get better.

- Problem: even when collision victims seem fine:
  - 3.8% might die soon after,
  - 4.8% could have serious brain injuries.

- The SENTINEL = a smart phone app to assist triage, suggesting:
  - a "Major Trauma Centre" for serious care
  - or to a "non-emergency hospital" if it's not as bad.

- SENTINEL will address adults (16+) in the first instance.
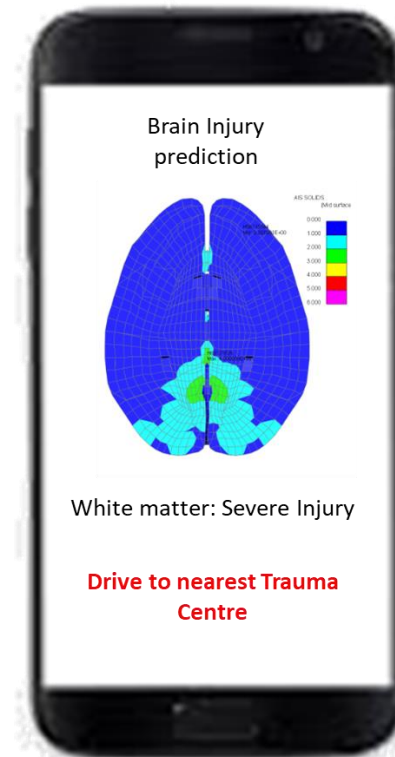
What it would look like when implemented

- Paramedics attending pedestrian collision
- Take photo of vehicle model and damage

- Provide/ estimate pedestrian:
  - Height and weight
  - Age
  - Gender

Compute impact speed
in real time
(PACE-AI patented app)
"Boundary Conditions"

Brain Injury
prediction

White matter: Severe Injury

Drive to nearest Trauma
Centre

Mobile App for
paramedics by the
roadside

SENTINEL aims to establish Mobile app feasibility/ proof of concept and
create a demonstrator

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SENTINEL

- *"In-Situ Mobile Application for the Triage of Pedestrians in Vehicle Collision"* (SENTINEL).

- £409,000 (Start November 2024). 3-year project.

- **The overall purpose of SENTINEL is to improve the accuracy of roadside triage of pedestrian collisions.**

- https://sentinel-rtc.coventry.ac.uk/

- Brain injury severity predictions on the mobile app will be based on computed methods.

- **What we need from you:**
  - Expert Insights on Criteria for Estimating Head/Brain Injury Severity in Blunt Trauma
  - We would like to know which method(s) you are currently using to extract brain injuries.
  - Survey: https://coventry.eu.qualtrics.com/jfe/form/SV_ezfd87eBDlSYAw6
  - Can you pass this survey on to whoever can contribute?
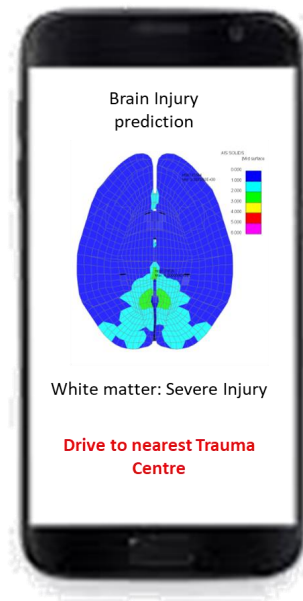
Thank You

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