

Measuring adrenaline release in the first few minutes after severe injury in motorcycle racers

Submission date 23/05/2025	Recruitment status Recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 11/06/2025	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 05/11/2025	Condition category Injury, Occupational Diseases, Poisoning	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Anecdotal experience from prehospital providers who attend injured motorcycle racers within minutes of an accident will often find the patient pale, clammy and with a difficult-to-palpate or absent pulse. This is often due to blood loss or other life-threatening injury but in some cases will resolve with no treatment & no significant bleeding or injury found. We propose that there is a significant release of catecholamines at the time of injury which results in severe vasoconstriction mimicking severe blood loss, injury or cardiac arrest.

We are in a fairly unique position in being able to attend severe trauma patients within minutes of their injury potentially allowing us to measure this. This study aims to see if there is a large release of adrenaline-like compounds during severe trauma that may mimic severe blood loss or cardiac arrest.

Who can participate?

Competitors in the 2025 Isle of Man TT who are injured during a race or practice session and require an intravenous cannula

What does the study involve?

Blood samples are obtained at the time of IV insertion and again when routine blood samples are taken on arrival in the Emergency department. This will be compared to the injury severity score to see if there is a relation between the two.

What are the possible benefits and risks of participating?

No obvious risks or benefits to participants

Where is the study run from?

Noble's Hospital (Isle of Man)

When is the study starting and how long is it expected to run for?

May 2025 to March 2026

Who is funding the study?

1. Manx Care (Isle of Man)
2. Isle of Man Medical Research (Charity) (Isle of Man)

Who is the main contact?

Dr David Frazer, David.Frazer@nobles.dhss.gov.im

Contact information

Type(s)

Public, Scientific, Principal investigator

Contact name

Dr David Frazer

Contact details

Emergency Department
Noble's Hospital
Strang
Isle of Man
IM4 4RJ
+44 (0)1624650366
david.frazer@gov.im

Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

174

Study information

Scientific Title

Pre-hospital measurement of catecholamine levels in injured motorcycle riders

Study objectives

There is a significant release of catecholamines at the time of injury, which results in severe vasoconstriction mimicking severe blood loss, injury or cardiac arrest.

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 12/05/2025, Isle of Man Research Ethics Committee (Public Health Directorate Cabinet Office, Isle of Man Government, Douglas, IM4 4RJ, Isle of Man; +44 (0)1624 685765; adam.dempsey@gov.im), ref: 174

Study design

Quantitative single-centre pilot study

Primary study design

Observational

Study type(s)

Diagnostic

Health condition(s) or problem(s) studied

Injured motorcycle riders

Interventions

Blood is taken as part of routine treatment and sent for additional testing to look at catecholamine levels.

Intervention Type

Other

Primary outcome(s)

Levels of metanepherines, metanepherine, 3-methoxytyramine and normetanepherine measured using blood test at arrival of prehospital treatment team and again on arrival at hospital

Key secondary outcome(s)

Severity of injury assessed using the Injury Severity Score at follow-up 1 month later

Completion date

08/03/2026

Eligibility**Key inclusion criteria**

Competitors in the 2025 Isle of Man TT who are injured during a race or practice session and require an intravenous cannula

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria

No significant injury

Date of first enrolment

25/05/2025

Date of final enrolment

08/03/2026

Locations**Countries of recruitment**

Isle of Man

Study participating centre**Noble's Hospital**

Emergency Department

Strang

Isle of Man

IM4 4RJ

Sponsor information**Organisation**

Manx Care

Funder(s)**Funder type**

Hospital/treatment centre

Funder Name

Manx Care

Funder Name

Isle of Man Medical Research (Charity)

Results and Publications

Individual participant data (IPD) sharing plan

The data sharing plans for the current study are unknown and will be made available at a later date

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Protocol file			23/05/2025	No	No