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

Submission date	Recruitment status	<ul><li>Prospectively registered</li></ul>
23/05/2025	Recruiting	[X] Protocol
Registration date	Overall study status	Statistical analysis plan
11/06/2025	Ongoing	☐ Results
Last Edited	Condition category	Individual participant data
05/11/2025	Injury, Occupational Diseases, Poisoning	[X] 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

### **EudraCT/CTIS** number

Nil known

### IRAS number

# ClinicalTrials.gov number

Nil known

# Secondary identifying numbers

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

### Secondary study design

Cross sectional study

### Study setting(s)

Other

### Study type(s)

Diagnostic

### Participant information sheet

Not available in web format

### 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 measure

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

### Secondary outcome measures

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

# Overall study start date

12/05/2025

# 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** 

### Age group

Adult

### Sex

All

# Target number of participants

30

# 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

## Sponsor details

Noble's Hospital Strang Isle of Man IM44RJ +44 (0)1624650366 Lesley.Clyde@nobles.dhss.gov.im

### Sponsor type

Hospital/treatment centre

### Website

https://www.gov.im/about-the-government/statutory-boards/manx-care/

# Funder(s)

### Funder type

Hospital/treatment centre

### **Funder Name**

Manx Care

### **Funder Name**

Isle of Man Medical Research (Charity)

# **Results and Publications**

Publication and dissemination plan

## Intention to publish date

# 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 typeDetailsDate createdDate addedPeer reviewed?Patient-facing?Protocol file23/05/2025NoNo