

Introduction

Tourism on the Isle of Skye, located in the Scottish Highlands, has experienced exponential growth in recent years. The island, renowned for its impressive landscapes and outdoor activities, welcomes over 650,000 visitors annually.[1] With increasing tourist numbers, rugged terrain and challenging hikes, there is potential for increased risk of injury and fractures.

This report assesses the impact of tourism on trauma presentations to Broadford Hospital Emergency Department (ED).



Aims and Objectives

The primary aim of this report was to assess the impact of tourism on trauma presentations to Broadford Community Hospital ED on the Isle of Skye.

Objectives:

- Determine the mechanism of trauma, preceding activity and the anatomical location of the injury obtained.
- Identify the geographical locations where fracture injuries were sustained over 21-days.
- Establish and analyse demographic trends in tourist case presentations, including sex, age and nationality
- Consider whether further interventions may be necessary to reduce fracture injuries.

Methods

Settings and Subjects

This study was conducted in a remote and rural emergency department at Broadford Community Hospital on the Isle of Skye.

- Eligible patients were those who presented to the Broadford ED with a trauma-related injury between the 13th of May- 2nd of June 2025.
- Participants needed to have a postcode out with Skye and Lochalsh to be included in this study.

Data Collection and Analysis

A proforma was created for data collection. This included the following described in **table 1**. The data was collected by an elective medical student and their medical supervisor over a 21-day period.

Variable	Details
Patient demographics	Age, sex and nationality treatment required
Geographic Location	Location where the trauma occurred
Mechanism of injury	Activity preceding the injury (e.g., hiking, walking, sightseeing)
Preceding activity	Anatomical site of the trauma
Treatment required	Treatment or intervention required

Results

Key findings

Of 37 tourist presentations, **23 (62.1%) were trauma-related**. Females accounted for 73.9% of trauma presentations. **Falls were the leading mechanism of injury (95.7%)**, with hiking being the most common preceding activity. The ankle was the most frequently injured anatomical site (**65.2%**), while fractures accounted for **73.91% of reported injuries**.

Demographics

37 tourists presented to the Broadford Hospital Emergency Department from 13th May- 2nd June 2025. **23 (62.1%)** of all tourist presentations were trauma-related. This established the sample size of this research (**n=23**).

The subjects were distributed by nationality into 15 countries as listed: England (**33.3%**), Italy (**26.67%**), Scotland (**13.33%**), Canada (13.33%) and Ireland, Hungary, America, France, Finland, Sweden, Switzerland, Portugal, The Netherlands and India each (**6.67%**).

Geographic Location of Trauma

There was an island-wide geographic distribution of trauma incidents, which can be observed in Figure 1.

Mechanism of Injury

The fall mechanism was determined by activity. The most common mechanism of preceding activity was **hiking (36.4)**, followed by sightseeing (27.3%) and walking (8.2%).

Anatomical Site of Injury

The most common anatomical sites of injury included the **ankle (65.2%)**, upper arm (13%), lower arm (13%), the upper leg (4.4%) and the torso (4.4%), highlighted in. Figure 2. Among the 15 ankle injuries sustained, there were 11 isolated fractures, 3 soft tissue injuries and 1 case involving both a soft tissue injury and a minor fracture.

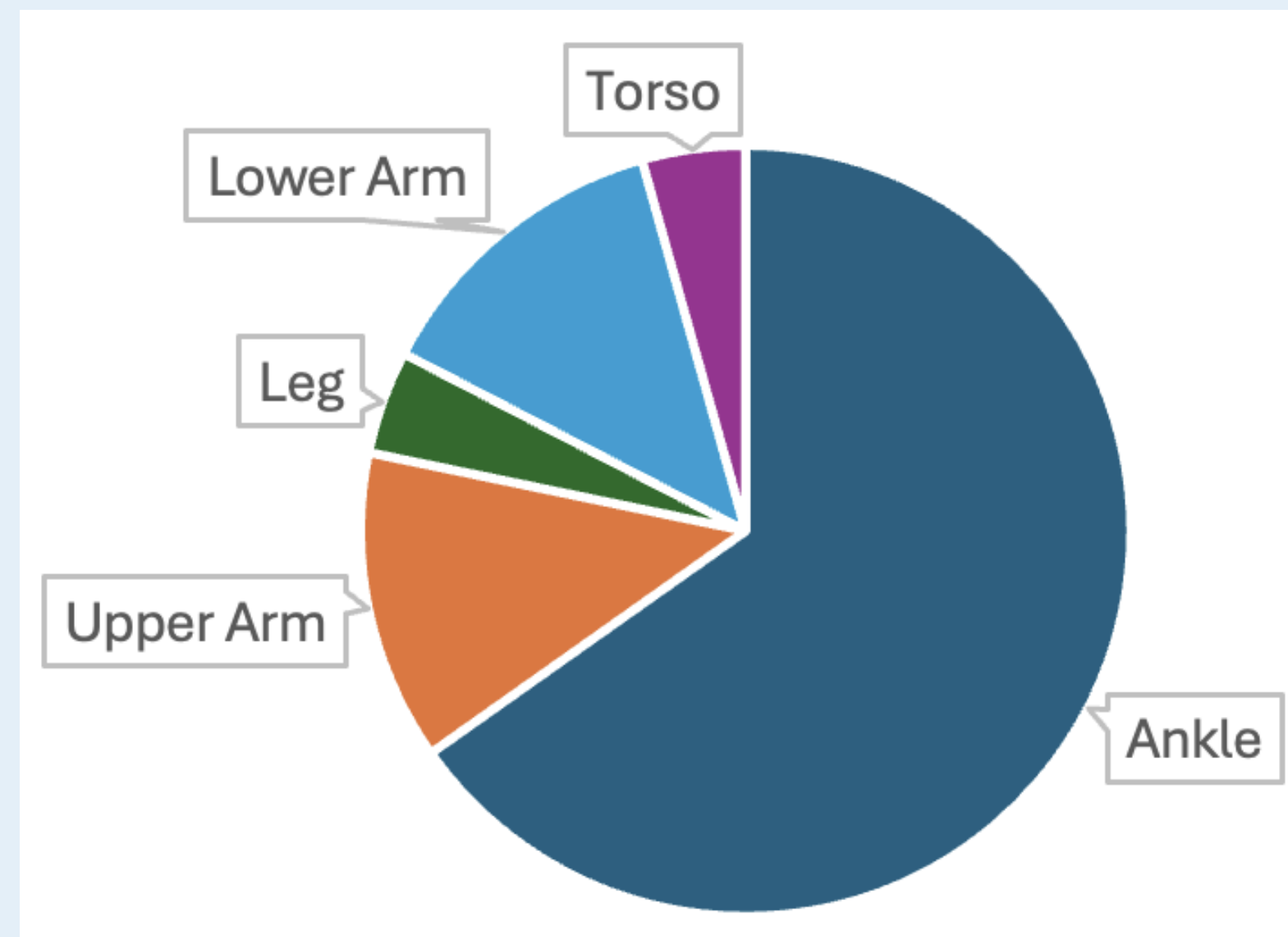
Treatment Required

Analysis of treatment and management data demonstrated that 34.8% of subjects were equipped with crutches to aid ambulation, 30.4% received a moonboot and 34.8% received a plaster cast to optimise recovery and provide stability.

Figure 1: The Geographic Distribution of Trauma Cases [2]



Figure 2: Anatomical Distribution of Injuries



Strengths and Limitations

This is the first study investigating the impact of tourism on trauma presentations to remote and rural Scottish Emergency Department.

This study is subject to several limitations. First, the sample size (n=23) was insufficient for robust analytical measurements. The 21-day time constraint of this study consequently led to simplified analytical techniques which may have failed to adequately identify relevant trends in tourist demographics and seasonal shifts in trauma presentations.

Conclusions

This review provides valuable statistics on the impact of tourism on trauma presentations to a rural emergency department. The global distribution of tourists visiting the island are responsible for the increasing number of trauma cases presenting to Broadford Community Hospital.

As tourist numbers on the Isle of Skye continue to grow, the likelihood of increased trauma presentations increases. We recommend that further community interventions need to be implemented, such as safety protocols and improved pathing. These interventions would enhance tourist experience and reduce tourist-related ED trauma burden by promoting safer outdoor recreation.