

What Do International Expedition Medics Do?

An Epidemiological Service Evaluation

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Introduction

- International expeditions vary considerably in environment, activity and participant demographics, requiring adaptable medical preparation.
- Evidence describing clinical presentations across expedition types remains limited. (1)
- Understanding presentations could inform medical kit composition, supply quantities and pre-expedition preparation. (2)
- TrailmedTM is a CQC registered organisation that has provided medical treatment to over 20,000 participants in over 50 countries worldwide. (3)

Aim: to describe the distribution of clinical presentations and medical outcomes across different international expedition types.



Methods

- Anonymised Rapid Assessment Documents (RADs) from TrailmedTM international expeditions in 2025 were extracted.
- Events were manually classified by environment and activity type which were not mutually exclusive.
- RADs recorded during pre-event clinics were excluded.
- Each RAD is classified by presenting clinical systems determined by reporting clinicians. RADs involving multiple systems were counted in each applicable category.
- For each expedition category, the proportion of RADs involving each clinical system or disposition was calculated using the total RADs within that category as the denominator.
- The NHS Health Research Authority decision tool indicated that formal research ethics review was not required for this service evaluation.

Results

TOTAL RAD forms n=827. 31 Events.	Desert	Altitude /Mountain	Tropical	Temperate / Savanah	Arctic / Ice	Ultra-run/walk	Cycle	Multisport	Trek
Number of RAD	354	111	55	257	49	569	19	130	114
Blisters	35%	18%	11%	19%	51%	28%	0%	28%	18%
Skin and Sub-Cutaneous (non-blisters)	6%	13%	31%	14%	8%	10%	32%	17%	12%
Dental	1%	1%	0%	0%	0%	0%	0%	0%	1%
Musculo-Skeletal	38%	6%	20%	31%	29%	34%	26%	35%	6%
Metabolic/ Dehydration/Vaso-vagal	6%	5%	22%	6%	4%	8%	16%	3%	5%
Gastro-intestinal/Urological	14%	46%	15%	21%	8%	18%	21%	5%	48%
Body Temperature	2%	1%	7%	3%	0%	2%	0%	1%	1%
Cardiovascular System	1%	1%	0%	0%	0%	1%	0%	0%	1%
Endocrine	0%	0%	2%	0%	0%	0%	5%	0%	0%
Respiratory	1%	10%	0%	2%	0%	1%	5%	4%	9%
Neurology	2%	6%	2%	1%	2%	2%	5%	2%	6%
Other	3%	11%	4%	6%	2%	3%	16%	6%	9%
Retired from Stage	3.7%	1.8%	1.8%	1.9%	4.1%	3.5%	5.3%	0.0%	1.8%
Medically Retired	0.3%	1.8%	14.5%	3.1%	4.1%	2.6%	5.3%	2.3%	1.8%
Conveyed to Hospital/ Emergency Services / Referred Local Medical Services	0.0%	0.9%	1.8%	0.8%	0.0%	0.4%	10.5%	1.5%	1.8%

Discussion

- We described the distribution and outcome of medical encounters across international expedition types.
- Variability exists between expedition type, and patterns identified may help inform expedition-specific planning.
- Blisters comprised a notably high proportion of arctic encounters, but a low proportion of cycling.
- Gastrointestinal/Urological presentations comprised a high proportion of altitude and trekking encounters.

Limitations

- RADs may not capture all encounters. Recording practices and system classification may vary between clinicians. Preventative, supportive and psychological interventions will not be captured.
- Broad clinical systems classifications do not highlight specific conditions (e.g. AMS)
- Records blunt, anonymised encounters; not individuals, participant numbers or event duration.

References

1 . Dallimore J, Anderson S, Imray C, Johnson C, Moore J, Winsor S, editors. Oxford Handbook of Expedition and Wilderness Medicine. 3rd ed. Oxford University Press, Incorporated; 2024. 1–16 p.
2. Wagner TD, Paul M, Tukei CA, Easter B, Levin DR. Preliminary Evidence-Based Method of Medical Kit Design for Wilderness Expeditions Modeled by a High-Altitude Expedition to Mount Kilimanjaro. Journal of Emergency Medicine. 2022 Jun 1;62(6):733–49.
3. TrailMed [Internet]. [cited 2026 Sept 30]. Available from: <https://www.trailmed.co.uk/>

Next Steps

- Expand dataset to 10 years
- Calculate presentation rates per participant-day
- Pseudo-anonymised dataset to identify repeat presentations