

# Paramedics and ultramarathons: lessons learned.

*A case study from the Triple Crown Under*

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## Conclusions

Paramedics appear to be well suited to medical roles in ultramarathons with critical decision-making skills supported by comprehensive assessment experience, but consideration needs to be taken with regards to clinician experience when in lead roles. The impact of environmental factors cannot be understated and should be considered in determining medical response capabilities as it may have an impact on response times and clinical outcomes. Paramedics planning to undertake these roles at ultramarathons would benefit from additional training in endurance medicine and allied health skills such as blister care, strapping and massage. Additionally, an understanding of the psyche of ultrarunners will aid in their decision-making when making medical withdrawal decisions and determining clinical management strategies.

## Next Steps

This observational research is limited in its scope as it does not cover the experiences of the participants, crews or race officials. It does however outline opportunities for future research into the design of medical response models in ultra marathons in Australia as well as the makeup of specific ultra marathon medical education. The results will inform further qualitative research in this important area.

## Acknowledgements

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## Introduction

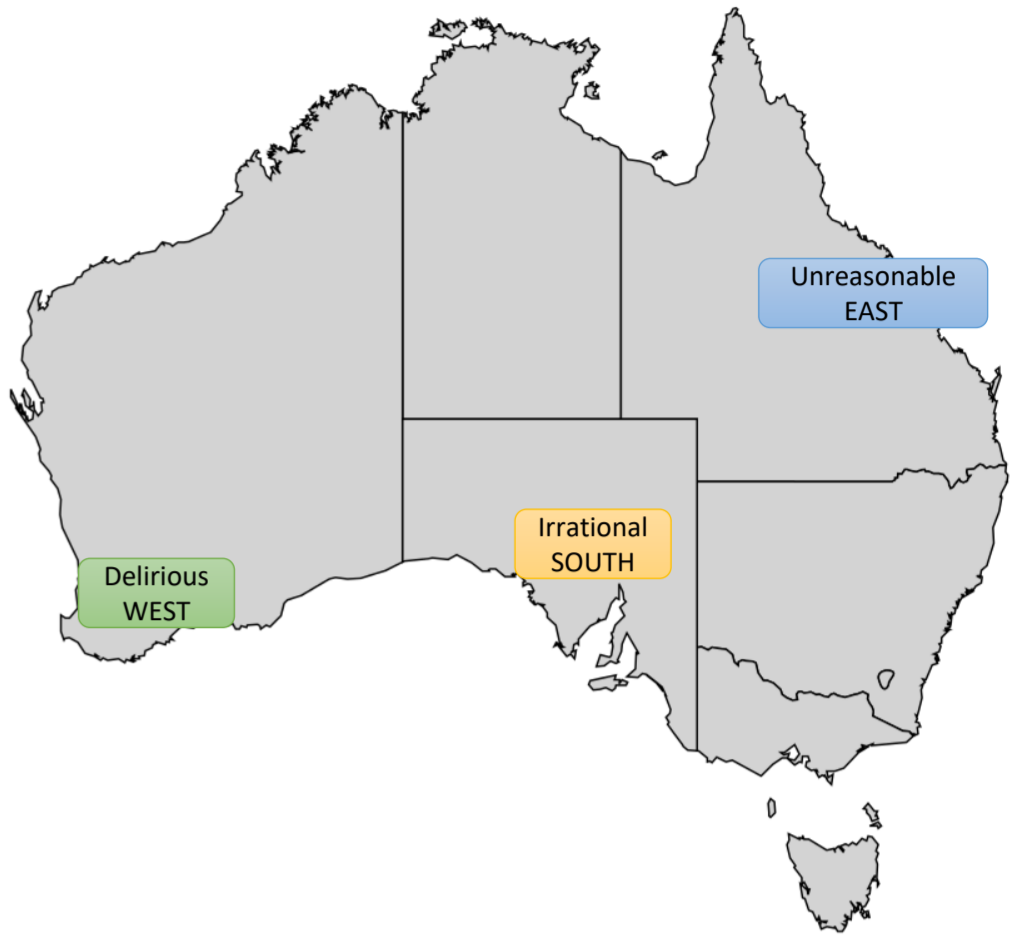
Medical response in ultramarathons is the responsibility of the organisation sponsoring the event however there are no formal requirements for the level of clinician required. These roles are often fulfilled by volunteers with some events utilising paid clinical staff of varying qualifications and experience. Paramedics often work in similar resource poor and unpredictable environments as those experienced in ultramarathons. However, there is no published research relating to the experiences of non-physician clinicians who undertake medical roles at ultramarathons.

## Aims

To understand and reflect on the learnings attained from a Paramedic led medical response at three 200-mile (324km) ultramarathons in rural Australia to inform future planning and research around medical response in ultramarathons.

## Methods

A qualitative case study methodology was used with data collected from the observations and experiences of the Head Medic (dual qualified Paramedic and Registered Nurse) and supporting medics through one-to-one discussion, review of race reports and event observations. The Head Medic was supported by medics from mixed clinical backgrounds including Registered Nurses (of varying specialties), Paramedics and first aiders. The observations, experiences and data were collated and analysed to establish common themes. These themes form the basis of the lessons learned.



## Results

### 1) Environmental factors have a significant impact on medical response.

Weather conditions had a profound impact on medical team ability to access patients on course. During two events significant rain, wind and fog delayed time to contact for medical staff on foot where there was no road access to patients. The same issues may be experienced when attempting to access civilians in similar environments however the nature of ultra events means that runners carry minimal equipment to shelter them from extreme weather. Cumulative fatigue from continuous running throughout the night can also profoundly affect decision making skills.



### 3) Understanding the psyche of ultra runners.

Having an understanding of the reasons athletes participate in these events and their desire to complete them aids in decision making with regards to their clinical management. Unlike traditional Paramedic practice, clinicians outlined that the goal cannot be to completely alleviate pain and suffering but to enable athletes to endure it for longer to complete the event safely. It was reported that runners would often continue despite medical advice unless medically removed from competition.

### 2) Allied health skills are beneficial.

Contact with medical staff was predominantly for non-urgent allied health specific interventions. These included foot care, massage, strapping and musculoskeletal injury assessment. The most common reason for contact with medical staff was blister management. Medics reported that they had undertaken additional training in these skills due to their lack of knowledge derived from their existing clinical experience. Despite this, they described that the experience and education they had was not sufficient to manage every situation and had a desire to learn more.



### 4) Confidence and independence in practice are essential.

Remote environments, the lack of clinical support, and communication difficulties mean that clinicians need to have high levels of confidence in their own practice and the ability to work independently. The Paramedics who worked in these roles outlined that their vocational experience enabled them to make appropriate clinical decisions in a timely manner. This was despite a low level of clinical oversight being available but cautioned those working in isolation.